VSB – TECHNICAL UNIVERSITY OF OSTRAVA
FACULTY OF ECONOMICS

DEPARTMENT OF FINANCE

Finanční analýza společnosti Bekaert
Financial Analysis of Bekaert Company

Student: Xiaoyu Long
Supervisor of the bachelor thesis: doc. Ing. Aleš Kresta, Ph.D.

Ostrava, 2018

VŠB - Technical University of Ostrava
Faculty of Economics
Department of Finance

Bachelor Thesis Assignment

Student: **Xiaoyu Long**

Study Programme: B6202 Economic Policy and Administration

Study Branch: 6202R010 Finance

Title: Financial Analysis of Bekaert Company
Finanční analýza společnosti Bekaert

The thesis language: English

Description:

1. Introduction
2. Description of Financial Analysis Methodology
3. Characteristics of Bekaert Company
4. Financial Analysis of Bekaert Company
5. Conclusion

Bibliography
List of Abbreviations
Declaration of Utilisation of Results from the Bachelor Thesis
List of Annexes
Annexes

References:

BREALEY, R. A., S. C. MYERS and F. ALLEN. *Principles of corporate finance*. 11th global ed. Maidenhead: McGraw-Hill Education, 2014. ISBN 978-0-07-715156-0.
DLUHOŠOVÁ, D., M. ČULÍK, P. GURNÝ, A. KRESTA, J. VALECKÝ and Z. ZMEŠKAL. *Financial management and decision-making of a company: analysis, investing, valuation, sensitivity, risk, flexibility*. Ostrava: VŠB-TU Ostrava, 2014. ISBN 978-80-248-3619-5.
ROBINSON, T. R., E. HENRY, W. L. PIRIE and M. A. BROIHAHN. *International financial statement analysis*. 3rd ed. Hoboken: Wiley, 2015. ISBN 978-1-118-99947-9.

Extent and terms of a thesis are specified in directions for its elaboration that are opened to the public on the web sites of the faculty.

Supervisor: **doc. Ing. Aleš Kresta, Ph.D.**

Date of issue: 24.11.2017
Date of submission: 11.05.2018

Ing. Iveta Ratmanová, Ph.D.
Head of Department

prof. Dr. Ing. Zdeněk Zmeškal
Dean

The declaration

"I hereby declare that I have elaborated the entire thesis including annexes myself."

Ostrava dated... 07.05.2018.....

Xiaoyu Long

Student´s name and surname

Contents

1. Introduction

Financial analysis is based on the financial data, which consists from balance sheet, income statement and cash flow statement. It would select some special accounting data, then use series of professional analysis techniques and methods to calculate these data, and interpreting the economic organizations' profitability of past and present economic activities. The essence of financial analysis is to obtain various financial information related to the decision and analyze, and interpret it.

The goal of the thesis is to perform a financial analysis of Bekaert company. In the analysis, we utilize the selected data of Bekaert's annual reports from 2011 to 2016.

This thesis has five chapters. The first chapter is an overview of the purpose and structure of the thesis. The second chapter elaborates financial analysis theory. It includes the three basic financial statements and common-size analysis which has horizontal and vertical these two types. At the same time, it also assesses company's financial performance and status from profitability ratios, liquidity ratios, solvency ratios and activity ratios these financial ratios analysis. Finally, it uses DuPont's analysis to assess the gradual changes in the return on equity and logarithm decomposition. The third chapter introduces the information of selected company, which includes Bekaert's history of development, business strategy, shareholder, organization and products. The fourth chapter is the most important part of this thesis, it applies the theory of Chapter 2. It uses these financial analysis methods, which is described earlier, to analyze Bekaert's financial position during the selected period. It mainly analyzes the status of Bekaert’s financial statements, and evaluates the ability to use assets, repay debt and profitability. The last chapter is a conclusion drawn after evaluation a series of data, it is a summary of the research results.

2. Description of Financial Analysis Methodology

This chapter includes an introduction to the three financial statements, and studies financial analysis methods for evaluation and interpreting financial data. Financial statements are the basis of financial analysis, and they are official financial activities records of companies, individuals or other entities. Enterprises often use common-size analysis and financial ratio analysis to evaluate financial statement data, and assess it's current and future financial status. Financial analysis is useful for assessing the effectiveness of company's operations and management. It can help manager to maximize the benefits of managing company operating funds and assets.

Sources of this chapter are from Brealey et al. (2014), Robinson et al. (2015) and Higgins et al. (2015).

2.1. Financial statements

The most common sources of information for evaluating a company's financial condition are financial statements, which consisting principally of balance sheet, income statement and cash flow statement. Although these statements can appear complex at times, they all rely on a very simple foundation. To understand this foundation and see the connection between these three statements, let us look briefly at the following.

2.1.1. Balance sheet

The balance sheet is a financial snapshot, which can reflect company's total assets, liabilities and equity at a given point in time, and it is a static representation of the company's operating activities. The most important function of it is to show the corporate operating conditions, and help analysts assess the company's ability to pay for recent operational needs, afford future debt obligations and distribute profit to the shareholders. A standard company balance sheet has two sides, one is assets that on the left. The other is financing, that includes liabilities and ownership equity, on the right. We use Table 2.1 as an example of a balance sheet.

Table 2.1 Balance sheet structure: Detailed ($ millions)

Assets		**Liabilities + Equity**	
Current assets		**Current liabilities**	
Cash and cash equivalents	4,285	Accounts payable	358
Accounts receivable	1,430	Current borrowings	16
Inventories	1,265	Other short-time liabilities	1,502
Other current assets	1,168	**Long-term liabilities**	
Total current assets	8,148	Long-term bank loans	1,746
Long-term assets		Bonds issued	987
Tangible assets	2,232	*Total liabilities*	4,609
Intangible assets	3,566	**Equity**	
Financial investments	544	Capital contributed by owners	1,098
Accumulated depreciation	（1,284）	Share premium	38
Net long-term assets	5,058	Retained earnings	7,461
		Total equity	8,597
Total assets	13,206	*Total liabilities and equity*	13,206

Source: Higgins et al. (2015, p. 10)

The basic equation for the balance sheet is:

$$total\ assets\ = total\ equity\ + total\ liabilities. \tag{2.1}$$

This equation shows how assets are financed: either by borrowing money (liability), or by using the owner's funds (equity). Balance sheets use double-entry bookkeeping for accounting, which is a specialized method of registering an economic business on two or more related account categories, and any economic activity will cause changes in funds or in financial revenues and expenditures. The two or more related accounts should be equal to keep a balancing, and it can occur on the two side or the same side of statement. For example, if the inventories increase $ 358 million, then the accounts payable would increase $ 358 million or the cash would decrease $ 358 million. In each instance, the double-entry nature of accounting guarantees that the basic accounting equation is valid for each transaction, and when all transactions are aggregated, it holds for the entire company.

Assets summarize the information about what a company owns and the value of these assets. Assets are resources controlled by the company as a result of past events and from which future economic benefits are expected to flow to the entity, and it is generated either by purchase, business activities or financing activities. The assets can be classified into fixed assets and current assets according to it's liquidity. Fixed assets are assets that used by a company over a period longer than one year with a relatively low liquidity. The categorization of it includes tangible assets such as equipment, intangible assets such as goodwill and financial assets such as shares. Current assets have a relatively short life with high liquidity, that can be converted into cash quickly. The categorization of it includes cash and cash equivalents, inventories like raw material and accounts receivable.

Liabilities and equity are mix of capital for company's assets financing. Liabilities represent money that has been borrowed and must be repaid back at some predetermined date. It can be classified as current liabilities such as accounts payable, that the borrowed money must be paid within 12 months, and long-term liabilities such as corporate bonds, that the money has been borrowed for longer than a year. Equity represents the shareholder's investments into company, and it has three categorizations: common and preferred shares, share premium and retained earnings. The value of it is abide by the equation,

$$registrated\ capital = sum\ of\ shares\ outstanding \cdot face\ value. \tag{2.2}$$

2.1.2. Income statement

If balance sheet is a time snapshot, the income statement and cash flow statement are a motion picture, which highlights the changes over time in two especially important balance sheet accounts. Business owners are naturally interested in how company operations have affected the value of their investment. The income statement addresses this question by partitioning the recorded changes in owners' equity into revenues and expenses.

The primary role of a for-profit enterprise is to generate revenue and earn a profit, and income statement shows how well a company does this. Income statement is an accounting statement that reflects the business results of a certain accounting period, and it may be expressed as either profit or loss. It fully reveals the various types of income or expenses incurred by a company during a given period of time, as well as the profits or losses incurred by the company.

Table 2.2 Income statement: Structure ($ millions)

Operating activities	Revenues	8,657
	- Costs of goods sold (costs of producing or acquiring product or service to be sold)	- 2,604
	= Gross profit	= 6,053
	- Operating expenses (marketing and selling, general and administrative, depreciation expenses)	- 4,249
	= Operating income (earnings before interest and taxes, EBIT)	= 1,804
Financing activities	- Non operating expenses	- 99
	= Earnings before taxes (EBT)	= 1,705
	- Income tax	- 407
	= Net income (EAT)	= 1,298

Source: Higgins et al. (2015, p. 11)

The basic equation underlying the income statement is:

$$revenues - expenses = net\ income/loss. \tag{2.3}$$

Revenues are amounts charged for delivery of goods or services of a company, while expenses are amounts that must be spent in the ordinary activities of the company. Net income records the extent to which net sales generated during the accounting period exceeded expenses incurred in producing the sales. Just as Table 2.2 represents, the format has two main subtotals to be calculated: operating activities and financing activities.

Operating activity, which also can be called operating profit before interest and taxes (EBIT) sometimes, is calculated as a difference between the sum of operating revenues and operating expenses. The operating revenues from sale of product, goods and services. While the operating expenses associated with generating operating revenues such as raw material consumption. Financing activities is calculated as a difference between the sum of financing revenues and financing cost. The financing revenues from interests received and owned securities, while the financing expenses from interests and coupons paid.

Company's tax (T) is calculated by applying corporate taxes rate (t),

$$T = earnings\ before\ taxes \cdot t. \tag{2.4}$$

This formula can only be calculated if the earning before taxes (EBT) is higher than zero. For

corporation income tax, the tax object of it is companies' profit, so the company won't be taxed when it's EBT is less than zero.

2.1.3. Cash flow statement

The cash flow statement is one of the three basic reports in financial statements, it provides information about company's cash inflows and cash outflows during a fixed period. The inflows are amount of money received during a particular period, meanwhile the outflows are amount of money spent during the time. Through cash flow statement, it can summarize the impact of operating activities, investing activities and financing activities on the enterprises' cash flow, and provide a better basis for assessing company's profits, financial status and governance than the traditional income statement. The basic formulas are as follows,

$$net\ cash\ flow = sum\ of\ inflows - \text{sum of outflows}, \tag{2.5}$$

$$cash\ at\ the\ end = cash\ at\ the\ beginning +/- net\ cash\ flow. \tag{2.6}$$

In essence, a cash flow statement just expands and rearranges the sources, and placing each source into three categories. The first is cash flow from operating activities, it mainly includes inflows and outflows from day-to-day company's activities, such as cash sales of goods, provision of labor services, purchase of goods, acceptance of labor services, payment of wages and payment of taxes. The second is cash flow from investment activities, it includes inflows and outflows as a results of selling and purchasing of long-term assets such as tangible assets, intangible assets and long-term investments in the shares and bonds. The last is cash flow from financing activities, it includes inflows and outflows from obtaining and repaying capital such as cash from issuing shares or bonds, paying out dividends and repayment of bonds. So the formula for cash flow can also be interpreted as follows,

$$total\ cash\ flow = cash\ flow\ from\ operating\ activities + cash\ flow\ from\ investing\ activities + cash\ flow\ from\ financing\ activities. \tag{2.7}$$

Cash flow statement can be reported in direct or indirect method, and both methods provide identical cash flow, which only the format of the calculation from operating activities is different. The direct method for creating a cash flow statement reports major classes of gross cash receipts and payments, and eliminates any impact of accruals. The reason for adopting the direct method is that it provides information on the specific sources of operating cash receipts and payments, and this additional information is useful for understanding historical performance and predicting future operating cash flows of company. The indirect

method uses net income as a starting point, it makes adjustments for all transactions for non cash components, then adjusts from all cash based transactions. An increase in an asset account is subtracted from net income, and an increase in a liability account is added back to net income. We can see the indirect cash flow statement in Table 2.3, this indirect method only shows the net result of revenues and expenditure, but it shows the reasons for differences between net income and operating cash flows. The direct method of preparing a cash flow statement results in a more easily understood report, while the indirect method is almost universally used.

Table 2.3 Cash flow: Indirect method ($ millions)

Operating activity	
Net income/loss	1,006
Adjustments for non-cash components	
Depreciations	307
Change in income taxes	(101)
Change in accounts receivables	(89)
Change in inventories	(77)
Change in accounts payable	1
Change in accrued wages and salaries payable	657
Change in notes payable	182
Net cash flow from operating activities	1,886
Investing activity	
Change in tangible assets	(195)
Change in intangible assets	(2,320)
Change in financial investments	298
Net cash flow from investing activities	(2,217)
Financing activity	
Change in common stocks	(317)
Dividends paid	(401)
Change in long-term debt	1,005
Change in deferred income tax	(12)
Net cash flow from financing activities	275
Total increase /decrease in cash flow	(56)

Source: Higgins et al. (2015, p. 20)

2.2. Common-size analysis

One of the tools that companies use to evaluate their financial statements is common-size analysis, and it often expresses financial data though assets or revenue. Essentially, a

common-size analysis creates a ratio between each financial statement item and the base item, which converting each line of financial statement data to an easily comparable amount measured as a percentage. Since the standardization of each line item eliminates the effect of size, common-size statements facilitate comparison across time periods and companies of different sizes, and it's helpful to understand the impact of each financial statement item and it's contribution to the resultant. Common-size analysis have horizontal common-size analysis and vertical common-size analysis these two types to be conducted.

2.2.1. Horizontal common-size analysis

Horizontal common-size analysis is a trend analysis, which compares growth in amounts over time for the company. It use a base year as the benchmark and then restate all subsequent years relative to that base. In simple words, horizontal common-size analysis helps to compare two different time periods. The formula is as follows,

$$\%\Delta I_{\mathrm{t}} = \frac{I_t - I_{t-1}}{I_{t-1}} \cdot 100\%. \tag{2.8}$$

Variable I_t stands for amount of the item in comparison year, and Variable I_{t-1} stands for amount of item in base year.

Table 2.4 Horizontal common-size balance sheet (%)

Assets	Period 1	Period 2
Cash	100	74
Investments	100	700
Receivable	100	93
Inventory	100	167
Fixed assets net of depreciation	100	200
Total assets	100	104

Source: Robinson et al. (2015, p. 309)

As Table 2.4 shows, two or more periods of financial statements are used for horizontal common-size analysis. The earliest period is usually used as the base period, and the items on the statements for all later periods are compared with items on the base period. A horizontal common-size balance sheet prepared by computing each balance sheet item's

increase or decrease from the previous year, or dividing each item's quantity by the base year, highlights changes in items. These changes can be compared to expectations.

2.2.2. Vertical common-size analysis

Vertical common-size analysis is a popular financial statement analysis method, that compares proportions over time for the company or compare proportions with those of competitors. It analyzes the accounts in a given period to a benchmark item in that same year. In simple words, vertical common-size analysis help express each item in relation to base item for a given period. In vertical common-size analysis, the percentage is computed by using the following formula,

$$percentage\ of\ base = \frac{amount\ \ of\ individual\ \ item}{amount\ \ of\ base} \cdot 100\%. \quad (2.9)$$

Table 2.5 Vertical common-size balance sheet (%)

	Period 1 Percent of total assets	Period 2 Percent of total assets
Cash	25	15
Receivables	35	57
Inventory	35	20
Fixed assets, net of depreciation	5	8
Total assets	100	100

Source: Robinson et al. (2015, p. 305)

As in Table 2.5, a vertical common-size balance sheet dividing each item on the statement by the same period's total assets and expressing the results as percentages, highlights the composition of the balance sheet.

2.3. Financial ratio analysis

Financial ratio analysis is the use of financial accounting and other information to assess a company's financial performance and understand the leverage of management controls. There are many relationships between financial accounts and the expected relationship from one point in time to another, and ratios are a useful way to express these relationships. The ratio represents one quantity relative to another, it is usually easy to

calculate. This chapter is divided into four parts, which cover profitability ratios, liquidity ratios, solvency ratios and activity ratios.

2.3.1. Profitability ratios

Profitability ratios analyze the company's ability to generate profit from invested capital in the form of return during a period, and the higher the profitability ratios, the better competitive position of the company. To conduct a more thorough analysis of profitability, analysts examine various margins and return on investment ratios. Below we discuss net profit margin, operating profit margin, return on assets and return on equity as examples..

Net profit margin (NPM)

"Net profit margin measures the amount of income that a company was able to generate for each dollar of revenue. A higher level of net profit margin indicates higher profitability and is thus more desirable."(*Robinson et al., 2015, p. 181*) This ratio is particularly important to business managers because it reflects the company's pricing strategy and ability to control operating costs. Depending on the nature of the product being sold and the company's competitive strategy, the profitability of the various industries varies greatly. The net profit margin (NPM) is the ratio of net income to revenues and indicates how much of each dollar of revenues is left over after all costs and expenses, and the formula is as follows,

$$NPM = \frac{EAT}{revenues}. \tag{2.10}$$

Operating profit margin (OPM)

When the company is partially financed by debt, part of the sales profits must be paid as the interest of the company's lender. We do not want to say that a company's profits are lower than it's competitors because it pays some profits as interest. Therefore, when we calculate the profit rate, it is useful to add the debt interest back to the net income. This provides another measure of profitability, the operating profit margin (OPM), and the formula of it is defined as follows,

$$OPM = \frac{EBIT}{revenues}. \tag{2.11}$$

The operating profit margin is the ratio of operating income to revenues. This ratio indicates how much of each dollar of revenues is left over after both the cost of goods sold and operating expenses are considered.

Return on assets (ROA)

Return on assets measures the company's total assets per dollar that can be used for debt and equity investor income. Total assets are greater than total capital because total capital does not include current liabilities. To observe the combined effects of profits, we can calculate the return on assets (ROA) as follow formula,

$$ROA = \frac{EBIT}{assets}. \tag{2.12}$$

Return on assets is a basic measure of the efficiency with which companies allocate and manage their resources. It differs from return on equity, in which we measure the percentage of profits that provide to owners and creditors, not just the owners.

Return on equity (ROE)

We measure the return on equity as the shareholder's income for each dollar invested. Does the company provide shareholders with enough returns? In order to answer this question, we need to compare it with the company's cost of equity. The most popular standard for financial performance of investors and senior management is the return on equity (ROE), it's defined as follows,

$$ROE = \frac{EAT}{equity}. \tag{2.13}$$

The return on equity is more specifically directed to the return to shareholders and is the ratios of net income to shareholder's equity. This return represents the profit generated per dollar of shareholders' investment.

2.3.2. Liquidity ratios

Liquidity ratios measure a company’s ability to meet it's immediate or short term liabilities and obligations. One determinant of a company’s debt capacity is the liquidity of it's assets. An asset is liquid if it can be readily converted to cash, while a liability is liquid if it must be repaid in the near future. In day-to-day operations, liquidity management is typically achieved through efficient use of assets. In the medium term, liquidity in the non-financial sector is also addressed by managing the structure of liabilities. Let us look at three of these ratios: current ratio, quick ratio and cash ratio.

Current ratio

Current ratio expresses current assets in relation to current liabilities. A higher ratio indicates a higher level of liquidity, which means it has a greater ability to meet short-term obligations. The formula is as follows,

$$current\ ratio\ = \frac{current\ \ assets}{current\ \ liabilities}. \tag{2.14}$$

This ratio measures a company's ability to satisfy it's current liabilities with it's current assets. "A current ratio of 1.0 would indicate that the book value of it's current assets exactly equals the book value of it's current liabilities. A lower ratio indicates less liquidity, implying a greater reliance on operating cash flow and outside financing to meet short-term obligations. Liquidity affects the company's capacity to take on debt. The current ratio implicitly assumes that inventories and accounts receivable are indeed liquid."(*Robinson et al., 2015, p. 322*) A company with a low current ratio lacks liquidity, in the sense that it cannot reduce its current assets for cash to meet maturing obligations. It must rely instead on operating income and outside financing.

Quick ratio

The quick ratio is more conservative than the current ratio because it includes only the more liquid current assets in relation to current liabilities. Inventory is subtracted because it is frequently illiquid. Like the current ratio, a higher quick ratio indicates greater liquidity, and the formula is as follows,

$$quick\ ratio = \frac{current\ \ assets - inventory}{current\ \ liabilities}. \tag{2.15}$$

The quick ratio indicates a company's ability to satisfy current liabilities with it's most liquid assets. "This ratio also reflects the fact that inventory might not be easily and quickly converted into cash, and furthermore, that a company would probably not be able to sell all of its inventory for an amount equal to its carrying value, especially if it were required to sell the inventory quickly. In situations where inventories are illiquid (as indicated, for example, by low inventory turnover ratios), the quick ratio may be a better indicator of liquidity than is the current ratio."(*Robinson et al., 2015, p. 322*)

Cash Ratio

The cash ratio is an even more stringent test that measures the company's ability to meet it's current liabilities with just the cash and cash equivalents. The formula is as follows,

$$cash\ ratio = \frac{cash + marketable\ \ securities}{current\ \ liabilities}. \tag{2.16}$$

"The cash ratio normally represents a reliable measure of an entity’s liquidity in a crisis situation. Only highly marketable short-term investments and cash are included. In a general market crisis, the fair value of marketable securities could decrease significantly as a result of market factors, in which case even this ratio might not provide reliable information."(*Robinson et al., 2015, p. 322*)

2.3.3. Solvency ratios

A company can finance it's assets with equity, debt or a combination of both, and the debt legally obligates the company to pay interest and repay principal as promised, which involves risk. We use solvency ratios to assess a company's level of financial risk, it measures company's ability to meets it's long-term liabilities obligations. The following ratios measure debt ratios and coverage ratio.

Debt ratio

Debt ratio focus on the balance sheet and measures the percentage of total assets financed with liabilities, that higher debt ratio means higher financial risk and thus weaker solvency. The formula is as follows,

$$debt\ ratio = \frac{total\ \ liabilities}{total\ \ assets}. \tag{2.17}$$

Debt-to-equity ratio

The debt-to-equity ratio is related the amount of company's debt capital relative to equity capital, it is similar to debt ratio that a higher ratio indicates weaker solvency. This ratio is useful in evaluating the quality of a company's bonds and debt obligations, and if the debt-to-equity ratio is higher than one, it means the company uses more debt than equity in assets financing. This gives rise to the debt-to-equity ratio, and it is defined as the follows,

$$debt\ to\ equity = \frac{tot\,al\ \ liabilities}{equity}. \tag{2.18}$$

financial leverage

The financial leverage ratio measures the amount of total assets supported for each unit of equity. The company increases it's financial leverage when it raises the proportion of debt relative to equity that used to finance the business. The higher the financial leverage ratio, the more leveraged the company is in the sense of using debt and other liabilities to finance assets. The challenge of financial leverage is to strike a prudent balance between the benefits and costs of debt financing. This ratio plays an important role in the DuPont decomposition of return on equity. The formula is as follows,

$$financial\ leverage = \frac{total\ \ assets}{equity}. \tag{2.19}$$

Interest coverage

The interest coverage ratio focus on the income statement, and it tells the extent to which the company's operating income is able to meet current interest payment. It is the extent to which interest obligations are covered by earnings. Banks prefer to lend to firms

whose earnings cover interest payments. Interest coverage is measured by the ratio of earnings before interest and taxes to interest payments. The ratio is defined as follows,

$$interest\ coverage\ = \frac{EBIT}{interest\ \ expense}. \tag{2.20}$$

2.3.4. Activity ratios

Activity ratios measure how well a company uses it's assets. It can help us evaluate the benefits produced by specific assets, such as inventory or account receivable, or they can be used to evaluate the benefits produced by all of a company's assets collectively. Assets efficiency utilization has a direct impact on liquidity. There are two types of activity measures: number of days and turnover ratios.

Average collection period (ACP)

The average collection period, which also known as the number of days of receivables, highlights a company's management of accounts receivable. The way to measure the efficiency of the credit operation by calculating the average length of time for customers to pay their bills. The faster the firm turns over it's receivables, the shorter the collection period. The average collection period (ACP) measures the conversion of accounts receivable into cash, and the formula is as follows,

$$ACP = \frac{accounts\ \ receivable}{revenues} \cdot 360. \tag{2.21}$$

Account receivable turnover (ART)

Receivables are sales for which the company has not yet been paid. The receivables turnover ratio (ART) provide an indication of the resources tied up in accounts receivable and the speed at which receivables are collected during the period. The formula is as follows,

$$ART = \frac{revenues}{accounts\ \ receivable}. \tag{2.22}$$

This estimate helps us gauge how long it takes customers to pay during the period. The longer customers take to pay on their accounts, all else being equal, the higher the investment in working capital that will be required by the company. This ratio is therefore quite in assessing a company's credit policy. If customers are quick to pay, unpaid bills will be a relatively small proportion of sales, and the receivables turnover will be high. Therefore, a comparatively high ratio often indicates an efficient credit department that is quick to follow up on late payers. Sometimes, however, a high ratio indicates that the firm has an unduly restrictive credit policy and offers credit only to customers who can be relied on to pay promptly.

Inventory turnover (IT)

Inventory turnover (IT) is the ratio of cost of goods sold to inventory. This ratio is an indication of the resources tied up in inventory relative to the speed at which inventory is sold during the period, and it can be expressed as follows,

$$IT = \frac{cost\ of\ goods\ sold}{average\ \ inventory}. \tag{2.23}$$

Firms with efficient inventory turnover don't tie up more capital than they need in raw materials and finished goods. They hold only a relatively small level of inventories, and they turn over those inventories rapidly. The balance sheet shows the cost of inventories rather than the amount that the finished goods will eventually sell for. So it is usual to compare the level of inventories with the cost of goods sold rather than with sales.

Total assets turnover (TAT)

Total assets turnover ratio (TAT) shows how much sales volume is generated by each dollar of total assets, and therefore it measures how hard the firm's assets are working. This is an efficiency ratio which tells how successfully the company is using it's assets to generate revenues, a higher ratio indicates greater efficiency. The formula is as follows,

$$TAT = \frac{revenues}{total\ \ assets}. \tag{2.24}$$

Some newcomers to finance believe assets are a good thing: the more the better. The reality is just the opposite. Unless a company is about to go out of business, it's value is in the income stream it generates, and it's assets are simply a necessary means to this end. Indeed, the ideal company would be one that produced income without any assets, then no investment would be required, and returns would be infinite.

2.4. DuPont analysis

DuPont analysis was developed by E. I. du Pont de Nemours in 1919 as a way to better understand return ratios and why they change over time. The bases for this approach are the linkages made through financial ratios between the balance sheet and the income statement. We can better understand a company's returns over time, or it's returns in comparison with competitors by breaking returns into their components. This approach decomposes the return on equity through three component ratios. The formula is as follows,

$$ROE = \frac{EAT}{revenues} \cdot \frac{revenues}{total\ \ assets} \cdot \frac{total\ \ assets}{equity}. \tag{2.25}$$

To learn more about how management can increase ROE, we use three main components to rewrite it. The three ratios are expressed as net profit margin, total asset turnover and financial leverage, and the expression can be written as follows,

$$ROE = NPM \cdot TAT \cdot financial\ leverage. \tag{2.26}$$

This means manager has three levers to control ROE. The first way is to squeeze out revenue for each dollar sold, increase their profit margin. The second way can be to improve company's sales or asset turnover per dollar asset. The third way is to adjust financial leverage. With a few exceptions, no matter how the management raises these ratios, ROE will eventually increase. Therefore, the NPM summarizes company's profit statement by showing the profit per dollar sold. The TAT summarizes company's management of assets on the balance sheet by showing the resources needed to support sales. The financial leverage ratio summarizes the balance sheet management by showing the amount of shareholder equity used for asset financing. The three levers reflect the main factors of the company's financial performance.

To separate the effects of taxes and interest, we can further decompose the net profit margin as follows,

$$\frac{EAT}{revenues} = \frac{EAT}{EBT} \cdot \frac{EBT}{EBIT} \cdot \frac{EBIT}{revenues}. \tag{2.27}$$

The three ratios are expressed as tax burden, interest burden and operating margin, and the expression can be interpreted as follows,

$$ROE = \frac{EAT}{EBT} \cdot \frac{EBT}{EBIT} \cdot \frac{EBIT}{revenues} \cdot \frac{revenues}{total\ assets} \cdot \frac{total\ assets}{equity}, \tag{2.28}$$

or

$$ROE = tax\ burden \cdot interest\ burden \cdot OPM \cdot TAT \cdot financial\ leverag. \tag{2.29}$$

This equation decomposes the ROE into five units. The first term measures the effect of taxes on ROE. Essentially, it reflects one minus the average tax rate, or how much of a company’s pretax profits it gets to keep. A higher value for the tax burden implies that the company can keep a higher percentage of it's pretax profits, indicating a lower tax rate. A decrease in the tax burden ratio implies the opposite, a higher tax rate leaving the company with less of it's pretax profits. The second term captures the effect of interest on ROE. Higher

borrowing costs reduce ROE. In such a case, the second term would measure both the effect of interest expense and non-operating income on ROE. The third term primarily measures the effect of operating profitability on ROE. The fourth term is again the total asset turnover ratio, which is an indicator of the overall efficiency of the company, and it measures the income generated by total assets per unit. The fifth term is the financial leverage ratio described above the total amount of a company's assets relative to it's equity capital.

"This decomposition expresses a company's ROE as a function of its tax rate, interest burden, operating profitability, efficiency, and leverage. An analyst can use this framework to determine what factors are driving a company's ROE. The decomposition of ROE can also be useful in forecasting ROE based upon expected efficiency, profitability, financing activities, and tax rates. The relationship of the individual factors, such as ROA to the overall ROE, can also be expressed in the form of an ROE tree to study the contribution of each of the five factors."(*Robinson et al., 2015, p. 339*)

2.4.1. Methods for quantification of influence

In order to measure the influence quantification, let us use the return on equity as a basic ratio, and use the net profit margin, assets turnover and financial leverage as component ratios. It has four different methods to analyze the impact of the change in component ratios on the basic ratio. There are five steps to solve this problem.

The first step is to calculate the basic ratio value for each period, and calculate the absolute change in basic ratio. The second step is to decompose the basic ratio into three component ratios. The third step is to calculate the component ratios values for each period. The fourth step is to quantify the impact of changes in component ratio on basic ratio by applying chosen method. The last step is to order the ratios according to their impact on the basic ratio.

The formula for selecting periodic ROE should be:

$$ROE_{\mathrm{n}} = \frac{EAT_{\mathrm{n}}}{equity_{\mathrm{n}}}. \tag{2.30}$$

The formula for absolute change in ROE should be:

$$\Delta ROE^{abs} = ROE_1 - ROE_0. \tag{2.31}$$

Method of gradual changes

This method can be applied regardless of positive or negative values in component ratios or basic ratio. But the order in decomposition can influence the results. It works with absolute changes in component ratios,

$$a_1 - a_0 = \Delta a. \tag{2.32}$$

Variable *a* stands for component ratio.

In the case of decomposition with three component ratios,

$$\begin{aligned} \Delta x_{a_1} &= \Delta a_1 \cdot a_{2,0} \cdot a_{3,0}, \\ \Delta x_{a_2} &= a_{1,1} \cdot \Delta a_2 \cdot a_{3,0}, \\ \Delta x_{a_3} &= a_{1,1} \cdot a_{2,1} \cdot \Delta a_3. \end{aligned} \tag{2,33}$$

Variable Δx_{a_1} stands for absolute change in the basic ratio caused by the change in the first (a_1) component ratio.

Logarithmic decomposition method

In this method, we need just one formula for the impact quantification regardless of how many component ratios we have. And it is calculated as follows,

$$\Delta x_{a_i} = \frac{\ln I_{a_i}}{\ln I_x} \cdot \Delta x. \tag{2.34}$$

The formula for index of the change in ROE and variable *a* should be:

$$I_{ROE} = \frac{ROE_1}{ROE_0}, \tag{2.35}$$

$$I_a = \frac{a_{\mathrm{i},1}}{a_{\mathrm{i},0}}. \tag{2.36}$$

Functional decomposition method

The formula for relative change in ROE and variable *a* should be:

$$\Delta ROE^{rel} = R_x = \frac{ROE_1 - ROE_0}{ROE_0}, \tag{2.37}$$

$$\Delta a_1^{rel} = R_{a_1} = \frac{a_1 - a_0}{a_0}. \tag{2.38}$$

This method works with the relative changes in basic and component ratios,

$$\begin{aligned} \Delta x_{a_1} &= \frac{1}{R_x} \cdot R_{\mathrm{a}_1} \cdot \left(1 + \frac{1}{2} \cdot R_{a_2} + \frac{1}{2} \cdot R_{a_3} + \frac{1}{3} \cdot R_{a_2} \cdot R_{a_3}\right) \cdot \Delta x, \\ \Delta x_{a_2} &= \frac{1}{R_x} \cdot R_{a_2} \cdot \left(1 + \frac{1}{2} \cdot R_{a_1} + \frac{1}{2} \cdot R_{a_3} + \frac{1}{3} \cdot R_{\mathrm{a}_1} \cdot R_{a_3}\right) \cdot \Delta x, \\ \Delta x_{a_3} &= \frac{1}{R_x} \cdot R_{a_3} \cdot \left(1 + \frac{1}{2} \cdot R_{a_1} + \frac{1}{2} \cdot R_{a_2} + \frac{1}{3} \cdot R_{a_1} \cdot R_{a_2}\right) \cdot \Delta x. \end{aligned} \tag{2.39}$$

Integral decomposition method

The procedure of this method is similar as in the case of functional method, it decomposes with three component ratios,

$$\Delta x_{a_1} = \frac{R_{a1}}{R_{x^*}} \cdot \Delta x,\ \Delta x_{a_2} = \frac{R_{a2}}{R_{x^*}} \cdot \Delta x,\ \Delta x_{a_3} = \frac{R_{a3}}{R_{x^*}} \cdot \Delta x,$$

$$R_{x^*} = \sum_{j=1}^{N} R_{a_j}. \tag{2.40}$$

The formula of integral decomposition method is as follows,

$$\Delta x_{a_j} = \frac{R_{a_j}}{R_{x^*}} \cdot \Delta x. \tag{2.41}$$

3. Characteristics of Bekaert Company

Through this chapter, we can get the main information of Bekaert. Bekaert is a technology leader in the world market of steel wire transformation and coating technologies, and it's a global company with almost 30 000 employees, which headquarters in Belgium and has factories in Asia and North America. Last year, Bekaert had earned 4.4 billion euro in annual revenue. In the following sections, it has been divided into the development, strategy, shareholder, organization and products to description.

Source of this chapter is from Bekaert's website https://www.bekaert.com/.

3.1. Development of Bekaert

The story of Bekaert started in 1880, so it has more than 100 years of history. At the beginning, the local farmers in Belgian village were faced with a common problem, that people in there showed stubborn habit of straying beyond the boundaries of their fields, what damaged other people’s property. Leo Leander Bekaert translated their need into a business opportunity, he started up a small business in barbed wire by putting nails in twisted wire.

Bekaert believes keeping production close to the market is the secret to success. After 1922 when they first invested in a wire drawing mill in France, it further expanded abroad to North America, United Kingdom, Argentina and Chile. In 1957, Bekaert took it's first steps in Asia set up a representative office in Tokyo, which is focused mainly on the steel cord business. The Bekaert family owned the entire share capital until 1972, after that it decided to open up to new investors through the Belgian Stock Exchange market, which helped the expansion and internationalization of steel cord. It till 1993, Bekaert recognized Chinese huge market potential and decides to invest in mainland China. The first steel cord planted in China, China-Bekaert Steel Cord (CBSC) opened in Jiangsu Province, that involved a majority participation in joint venture and local industrialist Fasten Group. In 2005, Bekaert not only celebrated it's 125th anniversary, but also launched a new corporate identity and a baseline better together. The baseline highlights the increasingly customer-focused business culture, and conveys more open communication, better cooperation, broader ownership and attention to corporate governance.

The process of Bekaert's development did not always smooth, it had experienced a difficult economic period in the early 1980s. In order to restore the company's long-term profitability on the basis of continued sustainable growth, Bekaert went through important

rationalization programs particularly in Wire Europe, aiming at creating product-dedicated plants, fostering higher flexibility and effectiveness, and paving the way for technology renewal. In 2012, the solar energy markets had undergone tremendous changes, which have triggered turmoil throughout the entire supply chain, and it was mainly impacted Belgian and Chinese operations.

3.2. Strategy of Bekaert

The strategy of Bekaert is aimed at consistently driving value creation for their shareholders by cost effectively creating superior value for customers. Bekaert promotes a transformation of the company's business toward higher level performance through newly defined vision and core strategies, which are the basis of it's priorities and actions for the coming years.

About Bekaert's Vision, it's consistent with better common aspirations, which are unremittingly pursue to be the preferred supplier for steel wire products and solutions, by continuously delivering superior value to our customers around the world. Bekaert has five long term core strategies: the first one is to drive customers into the heart of business, the second one is to drive income growth through value creation, the third one is to maintain technology leadership and speed, the next one is to take advantage of scale, reduce complexity and reach lowest total cost, and the last one is to engage and empower people.

Except these two ways, environmental protection is also a key element in Bekaert's research and development (R&D) policy. One of Bekaert’ s ambitions is to work together to create a cleaner world, and many developments and improvements in products and processes are the result of it' s quest for cleaner technologies and rational energy use. With their "New Environmental Technologies" project that was launched in 2011, Bekaert build up knowledge and expertise in environmental technologies and thereby boost the environmental performance of plants worldwide.

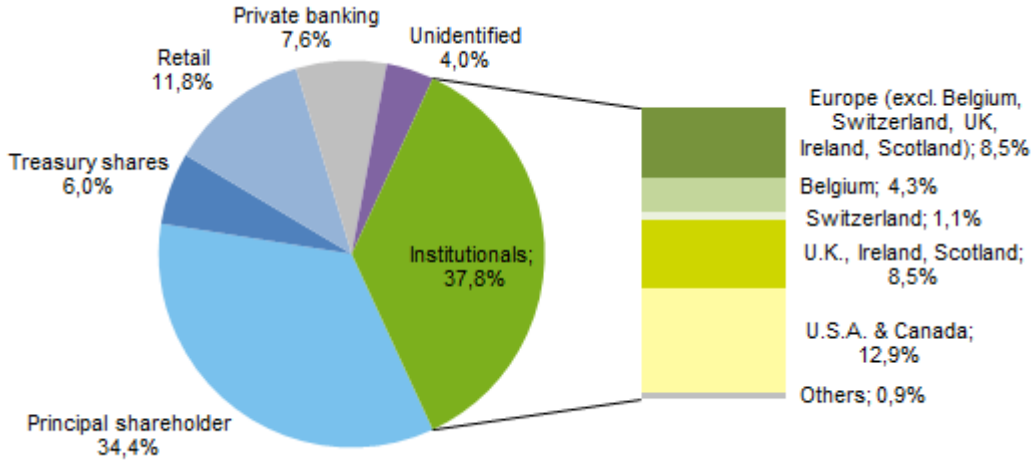
Product innovation is inseparable from technological progress. The technology center in Deerlijk, Belgium, plays a key role in Bekaert's research and development efforts, and directs the research performed by the Bekaert Asia R&D Center in Jiangsu Province and the regional development centers worldwide. In addition, highly qualified scientists and engineers of Bekaert work closely together with leading customers and colleagues from different business platforms across different regions. The company doesn't just pursue collaboration and communication internally, but also look outside. Bekaert has established strategic R&D

partnerships with research institutes and universities around the world, and it also obtain minority stakes in startups by investing in global companies and venture capital funds, what means Bekaert can use their innovative technologies to support it's sustainable profit growth strategy.

3.3. Shareholder of Bekaert

Bekaert creates value for shareholders by create value for their customers, and both private and institutional investors can invest in the company and get benefit from sustained commitment to transparent reporting. As a consequence, shareholders of Bekaert become more and more international.

Figure 3.1 Shareholder structure of Bekaert (2017)



Source: https://www.bekaert.com/en/investors/our-shareholders/shareholder-structure

In Figure 3.1, we show the detail of Bekaert shareholder structure, it is mainly composed of principal shareholders, retail, private banking and institutions. According to the right side, it can be realized that these institutions are located in Belgium, Switzerland, the United Kingdom and America, where Bekaert set up their factories.

In addition, the bondholders of convertible bonds and subscription rights can attend the general meeting in person and have no right to vote. Shareholders may attend the general meeting in person or through an agent and vote on all the shares, but must comply with the laws or the large number of shareholding notices and disclosure requirements of the "Articles of Association". One share equals one vote. There is no quorum requirement for the annual or special general assembly, no matter how many shares are present at the meeting, the resolution can be passed, which means the resolution was passed by a simple majority vote.

The EGM requires that the quorum be at least 50% of the registered capital. If a quorum is not reached, a second special general assembly must be held, and the second meeting did not have a quorum requirement. The resolution of the Extraordinary General Meeting called for a majority vote (75% or more in Belgian company law). With regard to the profit distribution policy of shareholders, the board of directors propose to the general meeting of shareholders distribute profits and provide stable or growing dividends to shareholders on the premise of ample cash flow of the company.

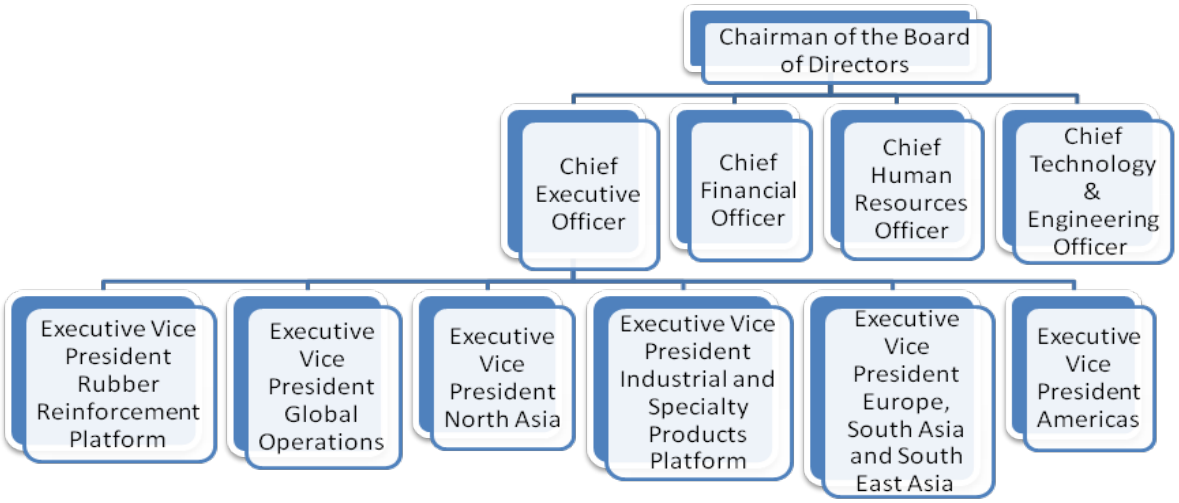
3.4. Organization and management of Bekaert

The operational responsibility for the company's activities is assigned to the Bekaert Group Executive, which is supervised by the Board of Directors. The Bekaert Group Executive is chaired by the Chief Executive Officer. The overall organization structure of Bekaert represents a balanced responsibility allocation for regions, business platforms and global support functions.

The Board of Directors is the company's supreme decision-making body in all matters other than those in respect of which decision-making powers are reserved to the General Meeting of Shareholders by law or the articles of association. The Board of Directors delegates its management and operational authority to the Bekaert Group Executive. The main task of the Board of Directors, under the leadership of the Chairman, is to determine the company's general policy and supervise it's activities. The Board of Directors has 15 members.

The regional management teams focus primarily on operational efficiencies and synergies, and on leading the operations in line with the set strategies. Their management scope covers the respective regional responsibilities in EMEA, North America, Latin America and Asia Pacific. The business platforms develop Bekaert business from an overall perspective across the regions and focus on strategy development and deployment with respect to customer, market and business development. Bekaert’s business activities have been clustered in two global business platforms: rubber reinforcement and industrial & specialty products. Global support functions manage functional excellence and compliance in support of the platforms and regions and include include technology & engineering, marketing, excellence, HR, finance, IT, purchasing, and other services on a global level.

Figure 3.2 Organization of Bekaert Group Executive



Source: https://www.bekaert.com/en/about-us/organization/management

About Figure 3.2, the chairman is Bert De Graeve, he joined Bekaert in 2002 and took up the assignments of Chief Financial and Administration Officer and General Secretary. He was appointed CEO of Bekaert in May 2006. Then in May 2014, he stepped up to become Chairman of Bekaert. Matthew Taylor is the Chief Executive Officer, he joined Bekaert on September 2013 as CEO designate and member of the Bekaert Group Executive. As of May 2014, he has been appointed CEO of Bekaert. Beatríz García-Cos Muntañola joined Bekaert as Chief Financial Officer on July 2016, and She is a member of the Bekaert Group Executive. Rajita D'Souza joined Bekaert on September 2017 as Chief Human Resources Officer. Geert Van Haver is the Chief Technology & Engineering Officer.

3.5. Products and applications of Bekaert

The core competences of Bekaert lie in the transformation of steel wire and coating technologies. For more than a century, it has been transforming steel wire and applying unique coating technologies to continuously improve the volume and the surface properties of steel wire products. At first, Bekaert used a protective zinc layer on it' s products to offer better quality and fight corrosion, thus creating a new kind of barbed wire that is still produced today: Motto®. And in the post-war period of 1945, Bekaert introduced new technologies, which include high-carbon steel wire, welded mesh, a great variety of new coatings and stainless steel wire products.

Bekaert focus on how to satisfy their customers, and create benefits for the customers by maximizing the synergy between the two core competences. It applys advanced coatings to provide specific properties for steel wire products and find new applications for existing products in other market segments.

In domestic market, they provide bookbinding wire, box stapling wire, bucket handle wire, cable and hose braiding wire, champagne cork wire, galvanized wire - hot dipped, nickel coated wire (scissors, lamp leads, toaster, iron), paint roller wire, steel wool wire and Stitching wire. In sports market, they are produce cable way rope wire, fishhook wire, general purpose rope wire and music wire. In textiles market, they sale brassiere wire, hook and eye wire, stainless steel fibers for heatable textiles and Wire for coathangers and coathanger hooks. They have three products in medical market: Bezinal® coated steel wire for medical springs. Bezinal® XC coated wire for an improved coilability of critical springs. Bezinal® XP coated wire for reliable, highly corrosion resistant springs.

4. Financial Analysis of Bekaert Company

This chapter uses three financial analysis tools that have been discussed previously to analyze Bekaert company's financial status from 2010 to 2016. All of the data, which we use in this section, comes from financial statements of Bekaert annual reports, and we can see it in Annexes 1-3. According to the company's report notes, it's consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRSs) which have been endorsed by the European Union, and it is presented in thousands of euro. The following contents include common-size analysis of Bekaert, financial ratios analysis of Bekaert and DuPont analysis of Bekaert.

4.1. Common-size analysis of Bekaert

Common-size analysis helps us to clarify the percentage changes in financial statements accounts over time and in scale. We use horizontal common-size analysis to analyze balance sheet, income statement and cash flow statement of Bekaert, and use vertical common-size analysis to analyze the ratio of balance sheet items to assets and income statement items to revenues.

4.1.1. Horizontal common-size analysis

Horizontal common-size analysis can help us to clarify the percentage changes in financial statements accounts over time. In Table 4.1, Table 4.2 and Table 4.3, we use year 2010 as the base year, and show the relative growth from 2011 to 2016.

In Table 4.1, we show a horizontal common-size analysis of Bekaert balance sheet, and from the each row, we can find that the overall value trend of these accounts is increasing, except for the reduction in equity. This phenomenon indicates that the company's liabilities and equity structure has changed, and it uses more debt to financing assets.

The lowest point of current assets appeared in 2013, which is -7.1%. Combined with Bekaert annual report 2013 and Annex 1, it's mainly due to the company used their short-term deposits to repay a bond of € 100 million in February 2013, and there was a loss of trade receivables occurred this year. The highest point of long-term assets appeared in 2016, which is 21.0%. According to Bekaert annual report 2016, this change was because of the creation of new software, and the new consolidations which brought a brand name of € 45.5 million and

customer relationships of € 4.8 million that increased the company's intangible assets. Another reason of it was an increase in goodwill for the Bridon-Bekaert Ropes Group (BBRG) business combination, and the increase in property for the investment programs.

The lowest point of current liabilities appeared in 2012, which is -8.3%, it's value decreased due to a repayment of part of trade and income taxes payable, and a decrease in the accrued interest on outstanding short-time interest-bearing debt. The highest point of long-term liabilities also appeared in 2016, which is 21.0%. In Bekaert annual report 2016, the increase in financial debt was mainly due to the company borrowed more long-term interest-bearing debt to repay an Eurobond of € 205 million in December 2016. The lowest point of equity appeared in 2013, which is -11.4%, due to the reduction in income that Bekaert can retain less earning.

Table 4.1 Horizontal common-size analysis of balance sheet

	2011/2010	2012/2010	2013/2010	2014/2010	2015/2010	2016/2010
Current assets	19.0%	0.7%	-7.1%	10.5%	2.8%	13.7%
Long-term assets	7.6%	-1.1%	-8.9%	4.8%	8.8%	21.0%
Total assets	13.5%	-0.1%	-8.0%	7.7%	5.7%	17.2%
Current liabilities	21.7%	-8.3%	-6.5%	14.2%	23.8%	15.6%
Long-term liabilities	21.5%	18.5%	-3.4%	28.6%	15.0%	60.6%
Total liabilities	21.6%	4.4%	-5.1%	21.0%	19.7%	36.9%
Equity	4.1%	-5.5%	-11.4%	-7.7%	-10.7%	-5.8%

Source: own elaboration based on company’s financial statements

In Table 4.2, we show a horizontal common-size analysis of Bekaert income statement, and the overall value trend of revenues and cost of goods sold is increase up to 2016, while the company's income is decline. As the increase in cost of goods sold is higher than the increase in company's revenues, the net income of it continued to decline.

The highest point of revenues appeared in 2016, and it is 13.9%. The Bekaert annual report 2016 shows that the company's consolidated sales had increased stemmed from firm demand in global automotive markets and steadily increasing sales volumes in industrial steel wire and construction markets. The lowest point of gross profit appeared in 2012, which is -47.0%, and it's because of the increase from acquisitions and currency movements, and a

decrease in sawing wire business. Due to the lowest gross profit, Bekaert has a lowest net income this year that the company had no profit but losses.

In 2012, there has an obviously decrease in both operating result and net income, that with a drop of more than 100%. From Bekaert annual report 2012, we can know that due to sawing wire with much lower volumes and a further 60% average price decrease as a consequence of the solar market collapse, and related to the other product groups with stable volumes but lower prices due to lower wire rod prices and price pressure in a global competitive environment, it's organic sales decreased. By the same time, the increase of new businesses and exchange rate movements led an increase in selling expenses. All of these factors have led to this consequence, and affected the revenue for next few years that it decreased in 2013 and 2014.

Table 4.2 Horizontal common-size analysis of income statement

	2011/2010	2012/2010	2013/2010	2014/2010	2015/2010	2016/2010
Revenues	2.4%	6.1%	-2.4%	-1.4%	12.5%	13.9%
Cost of goods sold	14.0%	26.4%	14.6%	15.8%	30.3%	28.3%
Gross profit	-28.0%	-47.0%	-46.7%	-46.3%	-33.8%	-23.7%
Operating result	-49.8%	-109.2%	-74.3%	-67.9%	-58.8%	-51.4%
Result before taxes	-50.2%	-126.1%	-89.3%	-79.2%	-75.3%	-70.3%
Income taxes	-51.1%	-51.4%	-65.6%	-69.6%	-73.9%	-55.5%
Net income	-48.0%	-147.3%	-90.9%	-78.0%	-73.4%	-71.8%

Source: own elaboration based on company’s financial statements

Although the Bekaert's profit situation hasn't been so good since 2012, it is gradually improved from 2013 to 2016, and profit is slowly increasing. The company can focus on improving the technology level and reducing costs to earn more profits.

In Table 4.3, we show a horizontal common-size analysis of Bekaert cash flow statement, we can see the company's cash use of operations, investments and financing activities from it. The overall value trend of cash flows from operating activities is increase, while the cash flows from investing activities and financing activities are decline. However, as can be seen from Annex 3, the cash flows from investing activities is negative, so the difference from the other two is that the smaller the better.

Table 4.3 Horizontal common-size analysis of cash flow statement

	2011/2010	2012/2010	2013/2010	2014/2010	2015/2010	2016/2010
Cash flows from operating activities	-69.2%	28.1%	-10.7%	-45.4%	70.4%	16.7%
Cash flows from investing activities	-12.1%	-61.4%	-65.8%	7.0%	72.4%	-52.5%
Cash flows from financing activities	-74.5%	-439.5%	-340.2%	9.8%	-434.3%	-477.0%
Net increase or decrease in cash flow	-127.8%	-59.6%	-80.5%	-76.6%	-122.3%	-101.2%

Source: own elaboration based on company's financial statements

The cash inflow from operating activities is the highest in 2015. The Bekaert annual report 2015 says that it's gross cash flows from operating activities increased by € 94.6 million thanks to better operating performance fueled by recent business combinations. The movements in other current assets and liabilities were largely due to insurance indemnifications for the fire in Rome being accrued in 2014 and received in 2015. These factors caused an increase of 70.4% in cash flows from operating activities compared to base year.

The largest cash outflow from investing activities also appeared in 2015, which is 72.4% higher than the base year. The reasons of it were cash-outs on new business combinations amounted to € 129.8 million, which was mainly related to the final acquisition phase of the Pirelli steel cord plants and Arrium's ropes business in 2015. Other portfolio investments mainly consist of Bekaert acquiring non-controlling interests in certain entities in order to pursue it's own strategic course.

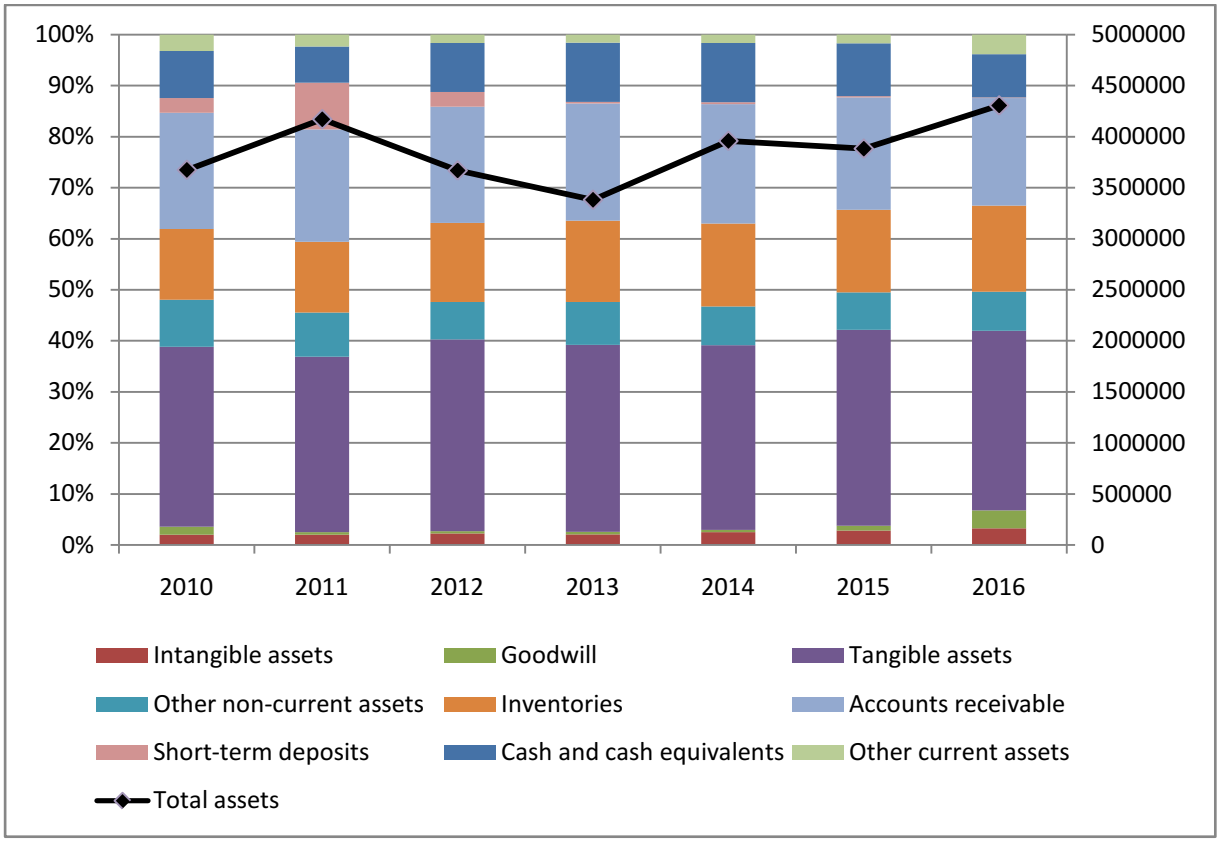
The change in cash flows from financing activities in 2016 is most noticeable, the cash outflow is more than inflow, that it's decrease to -477.0% compare the base. Bekaert repaid their long-term debt of € 375.3 million, which mainly related to a maturity of € 205.0 million Eurobond. It also settled an amount of € 84.3 million of the existing convertible bond by NV

Bekaert SA, and the repayments from China and Latin America. Other financial income and expenses were mainly € 2.5 million in taxation of financial transactions and bank charges.

4.1.2. Vertical common-size analysis

Vertical common-size analysis helps us to clarify the percentage changes in financial statements accounts size. In Figure 4.1, we reflect structure of assets, while Figure 4.2 reflects structure of liabilities and equity, and Figure 4.3 reflects structure of revenues.

Figure 4.1 Balance sheet vertical common-size analysis of assets (in thousands of €)

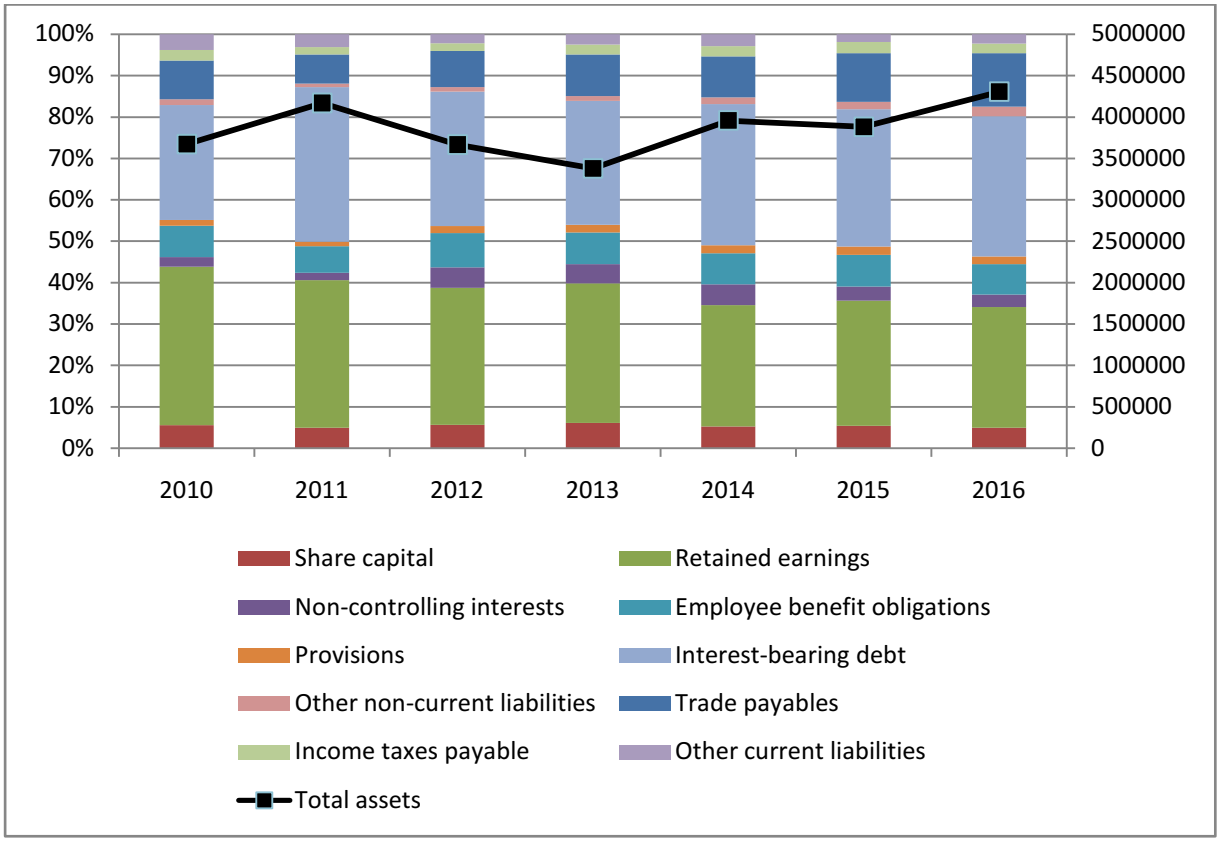


Source: own elaboration based on company's financial statements

In Figure 4.1, we show a vertical common-size analysis of Bekaert assets accounts, it compares items from current assets and long-term assets with the total assets. As Bekaert is a company that produces and sells steel wires, the most important component of it's total assets is their tangible assets, such as property and production equipment, which accounted for 35.2% in 2016. Though the company hold the largest amount of tangible assets in 2016, it's proportion of total assets in 2015 is even greater, which is 38.4%. At the same time, the decrease in total assets explained the reason why this ratio is higher than in 2016. The other important asset is accounts receivable, which accounts for the second largest share of total

assets, that it accounted a proportion of 21.1% in 2016, and the change of it is more volatile than the tangible assets. This has an impact on the increase of total assets. The third important asset is inventories of company, and it's proportion has a gradually increase that the peak of 16.8% is in 2016.

Figure 4.2 Balance sheet vertical common-size analysis of equity and liabilities (in thousands of €)

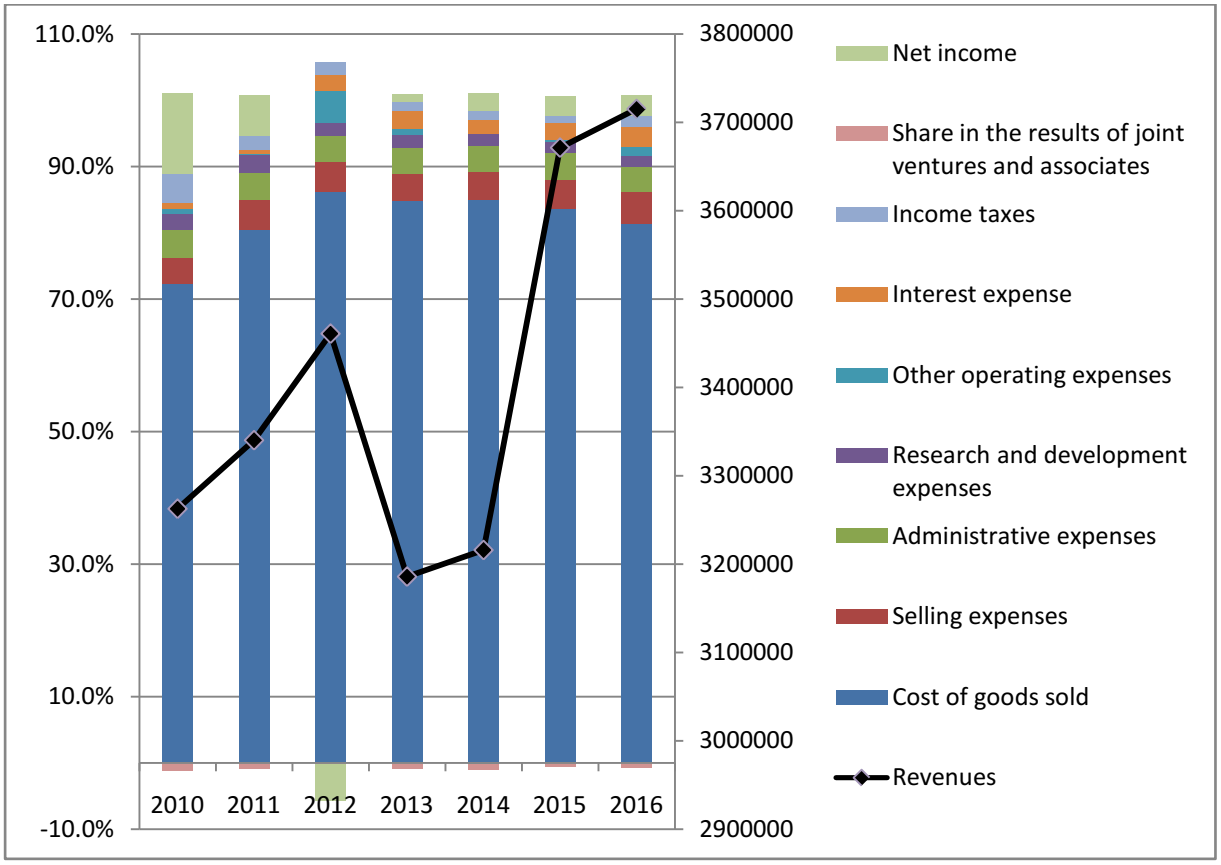


Source: own elaboration based on company's financial statements

In Figure 4.2, we show a vertical common-size analysis of Bekaert equity and liabilities accounts, it compares items from current liabilities, long-term liabilities and equity with the total assets. It is very clear, the most important component of this part to it's total assets is interest-bearing debt from long-term liabilities, and it has a highest proportion of 33.9% appeared in 2016. The other important components is their retained earnings from equity, which in 2016 is 29.1%, and it is the lowest proportion compared to the previous years. The third important part is trade payables from current liabilities, and in 2016 it has a peak of 15.3%.

As we can see, the proportion of equity has decreased, and the proportion of liabilities has increased. It also means that the pressure on the company to repay liabilities and fulfill it's financial obligations has increased.

Figure 4.3 Income statement vertical common-size analysis (in thousands of €)



Source: own elaboration based on company's financial statements

In Figure 4.3, we show a vertical common-size analysis of Bekaert income statement, it compares the company's operating activities and financing activities with it's revenues, and it represents the relationship between revenues, costs of goods sold and gross profit of the company. As the data in 2016 shows, a decrease in cost of goods sold would lead an increase in gross profit, and an increase in net income as result. In 2012, contrary to the revenues growth, the company's net income is negative, which means it has a financial loss. From Bekaert annual report 2012, we can know that due to sawing wire with much lower volumes and a further 60% average price decrease as a consequence of the solar market collapse, and related to the other product groups with stable volumes but lower prices due to lower wire rod prices and price pressure in a global competitive environment, it's operating income decreased. By the same time, the increase of new businesses and exchange rate movements led an increase in selling expenses. All of these factors have led to this consequence, and affected the revenues for next few years that it decreased in 2013 and 2014. Although Bekaert company's operations on the chart are not satisfactory, we can still see that it has improved it's profitability since 2013, and both revenues and net income are growing.

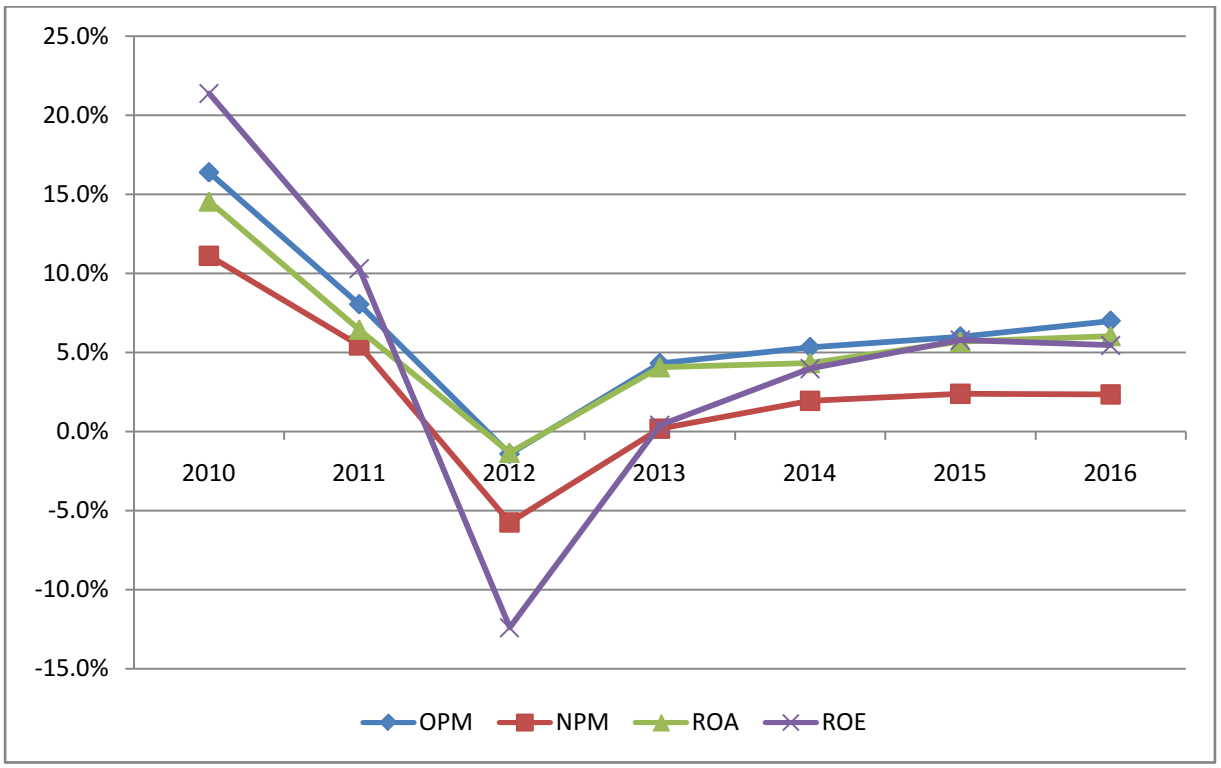
4.2. Financial ratio analysis of Bekaert

In this section, we use financial ratio analysis to more intuitively assess the financial status of Bekaert company from 2010 to 2016. It mainly reflects the company's operating conditions from four aspects: profitability ratios, liquidity ratios, leverage ratios and activity ratios. The data used to calculate these ratios comes from Annex 1 and Annex 2.

4.2.1. Profitability ratios

Profitability is the core concern of all parties, and it's also a key for company to succeed. Only long-term profit enterprises can truly achieve sustainable operations. Therefore, both investors and creditors attach great importance to the company's profitability ratios. Generally, we use the indicators of operating profit margin (OPM), net profit margin (NPM), return on assets (ROA) and return on equity (ROE) to measure the profitability of company.

Figure 4.5 Profitability ratios



Source: own elaboration based on company's financial statements

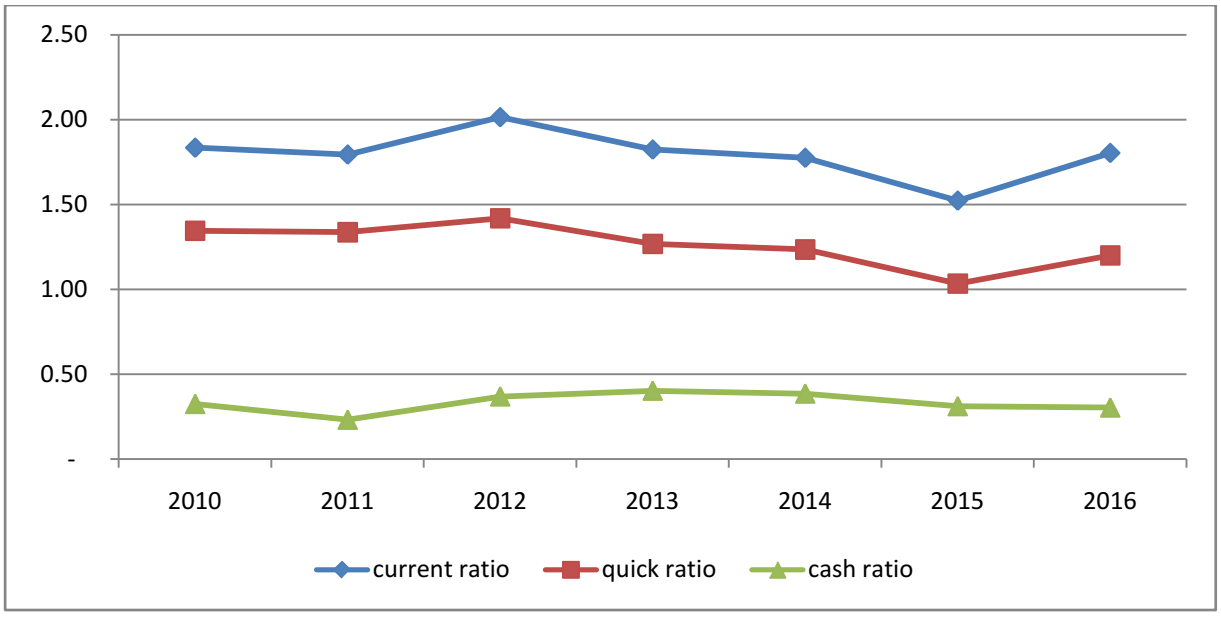
The operating profit margin and net profit margin respectively indicate company's business activities and overall profitability. The higher the ratios of OPM and NPM are, the stronger the profitability is. The return on assets reflects the profitability of shareholders and creditors jointly investing funds, while return on equity reflects only the profitability of

shareholders' investment. In Figure 4.5, we show Bekaert's profitability indicators from 2010 to 2016, we can see that it's OPM and NPM are decreasing from 2010 to 2012, and are increasing from 2012 to 2016. The rates of them are negative in 2012 because of an increase in total operating costs, especially the increase in non-recurring items from the sawing wire restructuring program, that led a deficit in earnings before interest and taxes and earnings after taxes. Compared with ROA, which change tendency is almost same as the OPM, ROE is more volatile, and we analyze it in DuPont analysis in more detail (Chapter 4.3). Although the situation seems to be improving, the company's profitability in 2016 is worse than in 2010. Bekaert's profitability is not good that all of these four ratios are relatively low in 2016.

4.2.2. Liquidity ratios

The liquidity ratios assess the ability of an enterprise to repay it's short-term debt. The lack of liquidity will not only affect the credibility of the company, increase the cost and difficulty of raising funds in the future, but also may cause it to fall into financial crisis or even go bankrupt. In general, company should use their current assets to repay current liabilities instead of selling long-term assets. Therefore, we use the current ratio, quick ratio and cash ratio to measure Bekaert's liquidity.

Figure 4.6 Liquidity ratios



Source: own elaboration based on company's financial statements

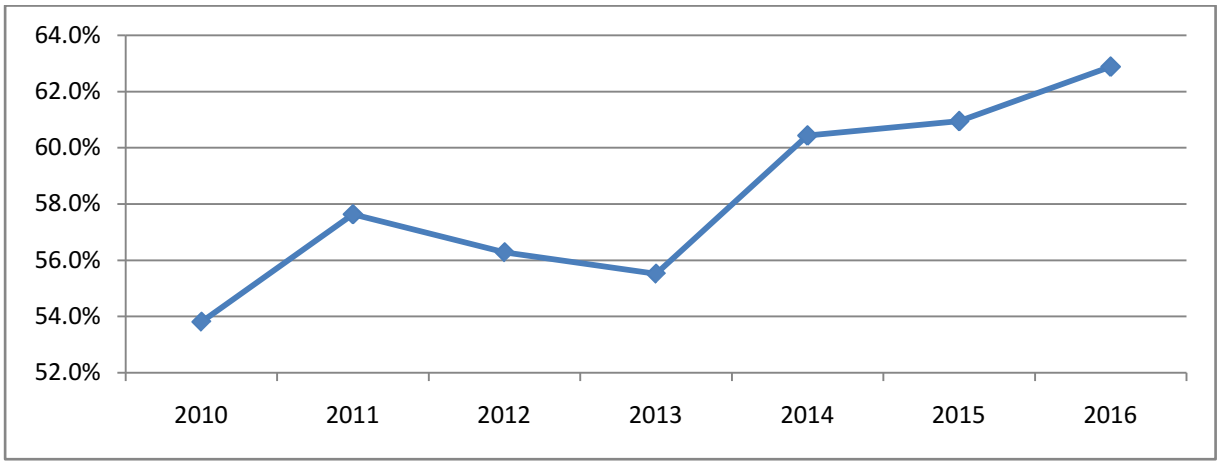
From Table 4.6, we can know that Bekaert current ratio from 2010 to 2016 is stable, fluctuating around 1.80, and there are two distinct peaks. The first appeared in 2012, when the

current ratio rose to 2.01 mainly because of the current liabilities decreased, and a reduction of property, plant and equipment in Annex 1 means that the company used their tangible assets to repay current liabilities. The second appeared in 2015, when it dropped to 1.52 because of the decrease in current assets and increase in current liabilities. The changes of Bekaert quick ratio are very similar to the current ratio but more stable, and this is due to the company's operating characteristics, it needs to store high amounts of inventories to produce. As for the cash ratio, it has a different trend, and the ratio of it is lower than others. According to the vertical common-size analysis of assets, cash and cash equivalents aren't the most important assets of Bekaert, and this is an explanation of the difference. The liquidity of Bekaert is relatively high in 2016, and it reflects the company has a safe structure in it's current assets and liabilities.

4.2.3. Solvency ratios

The solvency ratios assess the ability of an enterprise to repay it's long-term liabilities-interest and principal. In general, the long-term liabilities of company's borrowings are mainly used for long-term investments, and interest and principal are repaid with the income generated by the investment. The long-term solvency of a company is usually measured by the debt ratio and interest income multiples. We use the debt ratio, debt to equity ratio and interest coverage to measure Bekaert's solvency.

Figure 4.7 Debt ratio

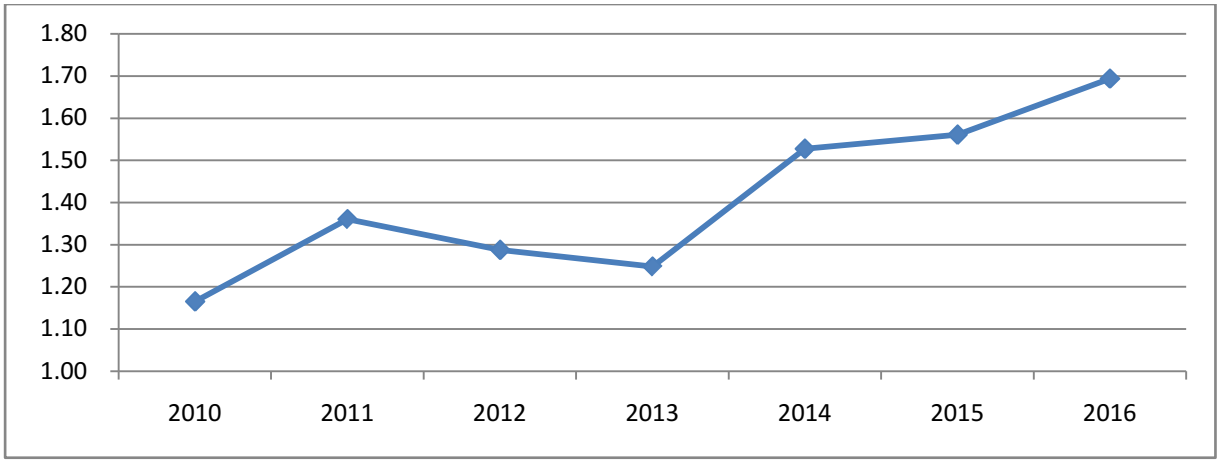


Source: own elaboration based on company’s financial statements

In Figure 4.7, we show the ratio of total liabilities to total assets. The general trend of it from 2010 to 2016 is increasing. Especially in 2016, Bekaert's debt ratio is as high as 62.9%, which means more than half of it's assets are financed through liabilities instead of equity.

That is, Bekaert's debt repayment pressure is relatively high, and the protection of creditor is low. However, it also helps the shareholders to conduct large-scale operations with less funds, and have a higher return to them.

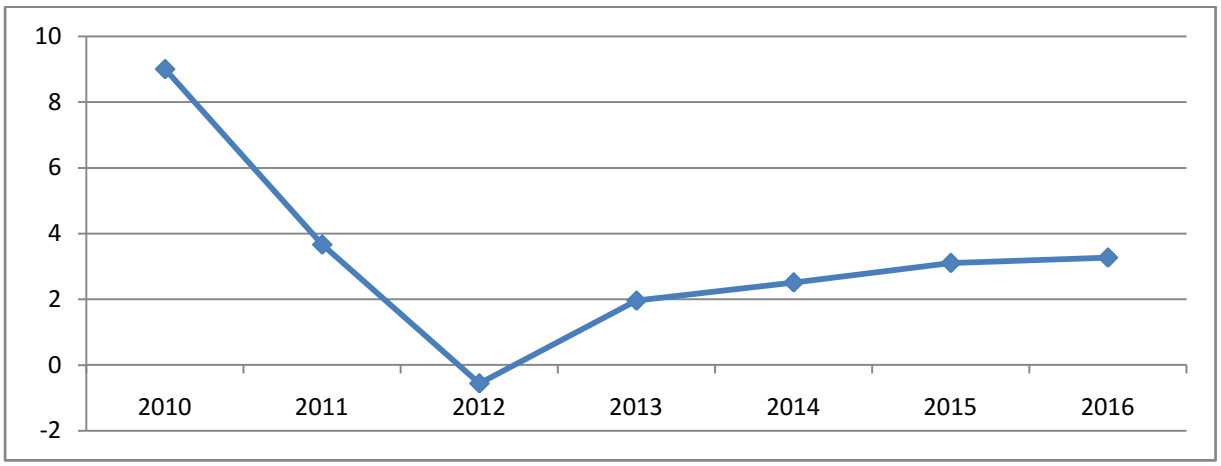
Figure 4.8 Debt to equity ratio



Source: own elaboration based on company's financial statements

In Figure 4.8, we show the ratio of total liabilities to equity. It has a same trend like Figure 4.7. From 2010 to 2016, the company's debt to equity ratio is increasing with a increase in total liabilities and a decrease in equity, and the lowest point appeared in 2013, which is 1.25, is due to the repayment of long-term liabilities. It increased to 1.69 in 2016. All of the ratios are higher then 1, which means the company has a high proportion of debt.

Figure 4.9 Interest coverage



Source: own elaboration based on company's financial statements

The interest coverage checks whether the company's operating profit is sufficient to cover the interest expense of the year. It analyzes it's long-term solvency from the profitability of the company's operating activities. This ratio is the EBIT to interest paid, and the greater the ratio, the stronger the long-term solvency. From Figure 4.9, we can see that Bekaert's

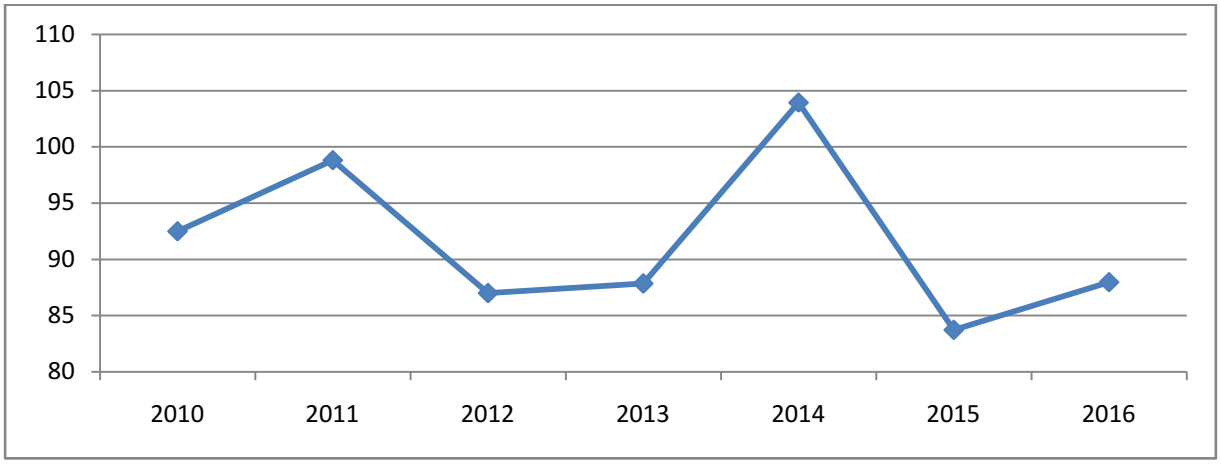
long-term solvency is decreased after the comparison of interest coverage ratios for 2010 and 2016, and in 2012, it is almost impossible to pay the interests with investment income due to the negative ratio, which is -0.62. In 2016, the interest coverage ratio of Bekaert is 3.27, which means that one-third of the company's operating income was used to pay their interest.

Based on these three solvency ratios, we can know that Bekaert used more liabilities for financing assets in 2016, which cost most of the company's income to pay interest of debts. Bekaert can issue new company shares to the public, improve the proportion of equity in financing assets, reduce their interest rates and increase profitability.

4.2.4. Activity ratios

The activity ratios are based on the turnover rate of company's various assets to measure the efficiency of the use of corporate assets. The faster the turnover rate, the faster the company's assets enter production, sales, and other operations. The average collection period (ACP), accounts receivable turnover (ART), inventory turnover (IT) and total assets turnover (TAT) are used to measure Bekaert's assets efficiency utilization.

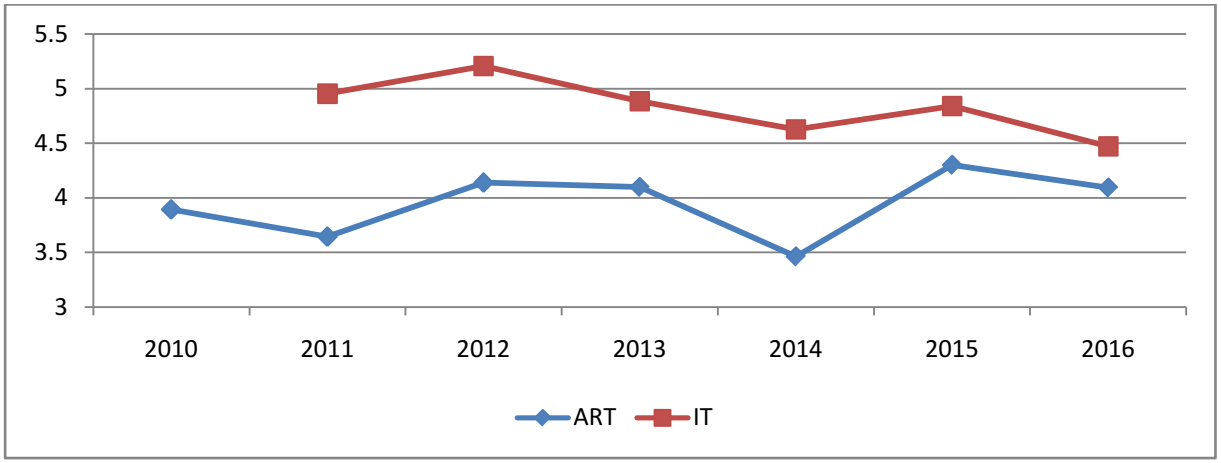
Figure 4.10 Average collection period



Source: own elaboration based on company's financial statements

The average collection period is a ratio of accounts receivable to revenues. It can be seen from Figure 4.10 that Bekaert's average collection period is stable, that with slight floats from 2010 to 2016, but it takes the company long time to collect it's receivables. The longest ACP is 104 days in 2014, and the shortest ACP is 83 days in 2015. This also means Bekaert increased their opportunity cost that it could have used the accounts receivables for investment. In this part, the company should adjust it's accounts receivable period to shortened it.

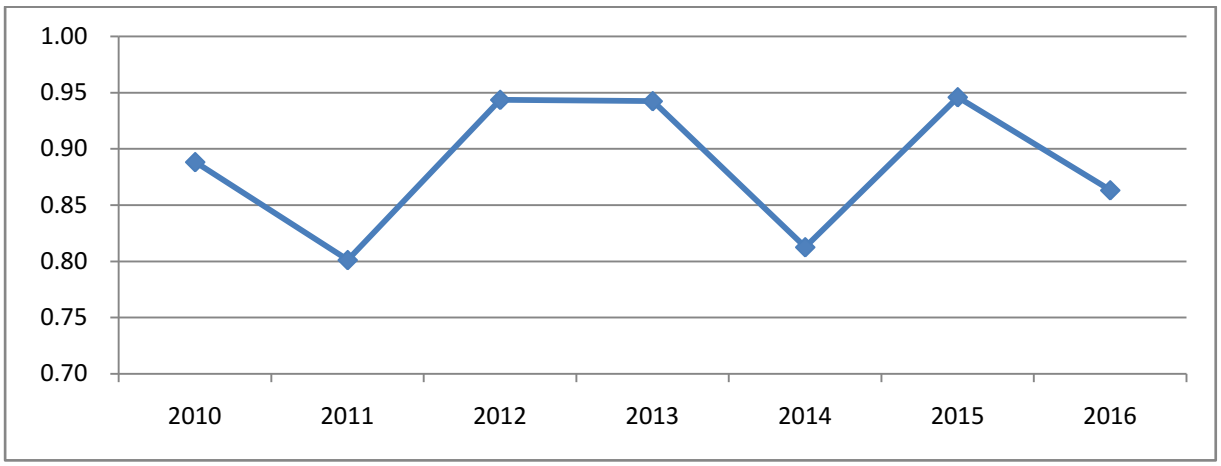
Figure 4.11 Activity ratios



Source: own elaboration based on company's financial statements

The account receivable turnover is a ratio of revenues to account receivable, and inventory turnover is a ratio of cost of goods sold to average inventory. According to Figure 4.11, the change of ART is opposite to the ACP, that the lowest point of 3.46 appeared in 2014, the highest point of 4.30 appeared in 2015, and the ratio of it is not high, which means Bekaert has a long operating cycle. In 2016, the ART of it is 4.09, which means Bekaert received an average 3 months of accounts receivable. The IT is slowly decreasing from 2010 to 2016, and it is fell to 4.47 in 2016. This is a good change, that the company can sell their inventory in less time.

Figure 4.12 Total assets turnover



Source: own elaboration based on company's financial statements

The total assets turnover is a ratio of revenues to total assets. Figure 4.12 shows us that Bekaert's TAT is floating between 0.80 to 0.95, so the changes of it are very small, which means the total asset turnover of the company is stable but inefficient. Each unit of currency invested in assets generates a maximum of 0.95 revenues for the company.

According to these four activity ratios, we can learn that Bekaert's accounts receivable collection period was relatively long, and the use of it's assets was inefficient in 2016. Bekaert can reduce it's accounts receivable to obtain more cash, and shorten the average collection period to increase assets utilization efficiency.

4.3. DuPont analysis of Bekaert

In DuPont analysis of Bekaert, we use four methods that have been mentioned in Chapter 2 to analyze the relationship between basic ratio and component ratios, and the basic ratio is return on equity, the component ratios include net profit margin, assets turnover and financial leverage. Tables 4.4-4.9 are the results comparison of method of gradual changes, logarithmic decomposition method, functional decomposition method and integral decomposition method from 2010 to 2016, and the results are very similar that there is only a little difference between these methods. In Table 4.5 and Table 4.6, we do not get the results of the logarithmic method due to negative data.

Table 4.4 Results comparison for applied methods (2010/2011)

	Method of gradual changes	Logarithmic method	Functional method	Integral method	Order
EAT/revenues	-10.90%	-10.82%	-10.82%	-10.90%	1
Revenues/assets	-1.03%	-1.56%	-1.62%	-2.10%	2
Assets/equity	0.85%	1.31%	1.37%	1.93%	3
Sum of influences	-11.1%	-11.1%	-11.1%	-11.1%	

Source: own elaboration based on company's financial statements

Table 4.5 Results comparison for applied methods (2011/2012)

	Method of gradual changes	Logarithmic method	Functional method	Integral method	Order
EAT/revenues	-21.16%	-	-22.68%	-24.44%	1
Revenues/assets	-1.93%	-	-0.04%	2.11%	2
Assets/equity	0.40%	-	0.02%	-0.37%	3
Sum of influences	-22.7%	-	-22.7%	-22.7%	

Source: own elaboration based on company's financial statements

Table 4.6 Results comparison for applied methods (2012/2013)

	Method of gradual changes	Logarithmic method	Functional method	Integral method	Order
EAT/revenues	12.80%	-	12.68%	12.57%	1
Revenues/assets	0.00%	-	0.01%	0.02%	3
Assets/equity	-0.01%	-	0.10%	0.21%	2
Sum of influences	12.8%	-	12.8%	12.8%	

Source: own elaboration based on company's financial statements

Table 4.7 Results comparison for applied methods (2013/2014)

	Method of gradual changes	Logarithmic method	Functional method	Integral method	Order
EAT/revenues	3.71%	3.63%	3.66%	3.59%	1
Revenues/assets	-0.56%	-0.23%	-0.33%	-0.052%	2
Assets/equity	0.44%	0.18%	0.25%	0.047%	3
Sum of influences	3.6%	3.6%	3.6%	3.6%	

Source: own elaboration based on company's financial statements

Table 4.8 Results comparison for applied methods (2014/2015)

	Method of gradual changes	Logarithmic method	Functional method	Integral method	Order
EAT/revenues	0.92%	1.01%	1.01%	1.02%	1
Revenues/assets	0.80%	0.73%	0.73%	0.72%	2
Assets/equity	0.08%	0.06%	0.06%	0.06%	3
Sum of influences	1.8%	1.8%	1.8%	1.8%	

Source: own elaboration based on company's financial statements

Table 4.9 Results comparison for applied methods (2015/2016)

	Method of gradual changes	Logarithmic method	Functional method	Integral method	Order
EAT/revenues	-0.11%	-0.10%	-0.11%	-0.11%	3
Revenues/assets	-0.50%	-0.51%	-0.51%	-0.54%	1
Assets/equity	0.27%	0.29%	0.29%	0.32%	2
Sum of influences	-0.3%	-0.3%	-0.3%	-0.3%	

Source: own elaboration based on company's financial statements

Based on these tables, we can see that in addition to 2011/2012, the sum of influence to ROE is decreasing during 2010-2016. From 2010 to 2015, net profit margin has the greatest impact on return on equity (ROE), and the impact of it on the sum of influence changed from negative to positive. From 2015 to 2016, assets turnover has the greatest impact on ROE, which is negative. Therefore, the best way for Bekaert to improve their ROE is through increasing the company's net profit margin.

4.4. Summary of the findings

In this section, we conclude the financial analysis of Bekaert company from 2010 to 2016 based on the above series of calculations.

For Bekaert company, the property, accounts receivable and inventories accounted for 70% of it's assets. The structure of company's equity and debt has changed, it has a decrease in the proportion of equity, and an increase in the proportion of liabilities.

As it can be seen in the analysis of liquidity ratios and solvency ratios, Bekaert' s short-term liabilities solvency is relatively stable, while it's long-term liabilities obligations are increased. This also means that the company can use more funds for large-scale investment, but the risk of bankruptcy is also increasing. The reduction in equity also reflects the company's unwell operating conditions. As the increase in cost of goods sold is higher than the increase in company's revenues, the net income of it continued to decline. This shows the company's production and sales expenses are too high to earn more profits. In order to improve Bekaert's profitability, it should try to reduce costs. From the DuPont analysis, the most effective way to progress Bekaert's return on equity is through adjusting the net profit margin. The company can reduce it's accounts receivable to obtain more cash, and shorten the

average collection period to increase assets utilization efficiency. It can also focus on improving the technology level and reducing costs to earn more profits and improve profitability.

5. Conclusion

Financial analysis is a process of selecting, evaluation and interpreting financial data. The goal of the thesis is to perform a financial analysis of Bekaert company. In the analysis, we utilize the selected data of Bekaert's annual reports from 2011 to 2016. In this chapter, we draw conclusions on the full thesis.

This thesis consists of five chapters. The first chapter is a introduction of purpose and structure of the thesis. The second chapter elaborates financial analysis theory, which includes financial statements, common-size analysis, financial ratio analysis and DuPont's analysis. The third chapter introduces the Bekaert's information of development, business strategy, shareholder, management and products. The fourth chapter uses these described financial analysis methods to analyze Bekaert's financial position from 2010 to 2016. It mainly analyzes the status of Bekaert’s financial statements, and evaluates the ability to use assets, interest payment and profitability. The last chapter is a conclusion drawn after evaluation a series of data, it is a summary of this research results.

Combining the content of this thesis, we can know Bekaert is a company that produces and sells steel wires, it's property, accounts receivable and inventories accounted for 70% of the company's assets in 2016. The structure of company's debt has changed, it has a decrease in the proportion of current liabilities, and a increase in the proportion of long-term liabilities, which is conducive to financing the assets through it's long-term bank loans. The increase in cost of goods sold is higher than the increase in company's revenues, and the net income of it continued to decline. From the financial ratios analysis, we see that Bekaert's profitability is poor, the proportion of it's liabilities is high and the assets efficiency is low, but it has a high liquidity. The company may also see it's shortage in assets management, it should try to decline the proportion of accounts receivable, and increase the proportion of intangible assets such as new technology. The company should try to improve it's competitiveness through new production technologies and better goods. These can improve the profitability and efficiency. For their solvency, Bekaert can issue new company shares to increase their equity.

Bibliography

a) Publications

[1] BREALEY, R. A., S. C. MYERS and F. ALLEN. *Principles of corporate finance*. 11th global ed. Maidenhead: McGraw-Hill Education, 2014. ISBN 978-0-07-715156-0.

[2] DLUHOŠOVÁ, D., M. ČULÍK, P. GURNÝ, A. KRESTA, J. VALECKÝ and Z. ZMEŠKAL. *Financial management and decision-making of a company: analysis, investing, valuation, sensitivity, risk, flexibility*. Ostrava: VŠB-TU Ostrava, 2014. ISBN 978-80-248-3619-5.

[4] HIGGINS, R. C., J. KOSKI and T. MITTON. *Analysis for Financial Management*. 11th ed. New York: McGraw-Hill Education, 2015. ISBN 978-0-07-786178-0.

[3] ROBINSON, T. R., E. HENRY, W. L. PIRIE and M. A. BROIHAHN. *International financial statement analysis*. 3rd ed. Hoboken: Wiley, 2015. ISBN 978-1-118-99947-9.

b) Electronic documents

[1] Bekaert Annual report. (2011-2016) [online]. Available on https://www.bekaert.com/en/investors/investor-news/annual-reports

List of Abbreviations

ACP	Average collection period
ART	Account receivable turnover
BBRG	Bridon-Bekaert Ropes Group
CBSC	China-Bekaert Steel Cord
CEO	Chief Executive Officer
EBIT	Earnings before interest and taxes
EBT	Earnings before taxes
EAT.	Earnings after taxes
EGM	Extraordinary General Meeting
EMEA	Europe, Middle-East and Africa
IT	Inventory turnover
IFRSs	International Financial Reporting Standards
NPM	Net profit margin
OPM	Operating profit margin
ROA	Return on assets
ROE	Return on equity
R&D	Research and development
TAT	Total assets turnover

Declaration of Utilization of Results from a Bachelor Thesis

Herewith I declare that

- I am informed that Act No. 121/2000 Coll. – the Copyright Act, in particular, Section 35 – Utilization of the Work as a Part of Civil and Religious Ceremonies, as a Part of School Performances and the Utilization of a School Work – and Section 60 – School Work, fully applies to my bachelor thesis;
- I take account of the VSB – Technical University of Ostrava (hereinafter as VSB-TUO) having the right to utilize the bachelor thesis (under Section 35(3)) unprofitably and for own use ;
- I agree that the bachelor thesis shall be archived in the electronic form in VSB-TUO's Central Library and one copy shall be kept by the supervisor of the bachelor thesis. I agree that the bibliographic information about the bachelor thesis shall be published in VSB-TUO's information system;
- It was agreed that, in case of VSB-TUO's interest, I shall enter into a license agreement with VSB-TUO, granting the authorization to utilize the work in the scope of Section 12(4) of the Copyright Act;
- It was agreed that I may utilize my work, the bachelor thesis, or provide a license to utilize it only with the consent of VSB-TUO, which is entitled, in such a case, to claim an adequate contribution from me to cover the cost expended by VSB-TUO for producing the work (up to its real amount).

Ostrava dated.....02.05.2018.....

Xiaoyu Long 龙晓宇.....

Student´s name and surname

List of Annexes

Annexes

Annex 1

Balance sheet of Bekaert (in thousands of €)

	2010	2011	2012	2013	2014	2015	2016
Non-current assets	1,765,873	1,900,018	1,746,632	1,608,640	1,850,842	1,920,697	2,136,528
Intangible assets	73,051	82,640	82,259	71,043	98,087	109,448	140,377
Goodwill	58,097	20,908	16,941	16,369	18,483	35,699	152,345
Property, plant and equipment	1,295,115	1,433,601	1,377,542	1,239,058	1,432,803	1,490,454	1,514,714
Investments in joint ventures and associates	243,795	258,260	167,595	155,838	155,734	114,119	146,582
Other non-current assets	32,128	20,878	43,732	48,781	44,468	39,773	32,142
Deferred tax assets	63,687	83,731	58,563	77,551	101,267	131,204	150,368
Current assets	1,907,264	2,269,087	1,921,066	1,771,817	2,106,873	1,960,422	2,167,785
Inventories	507,650	577,935	567,665	539,265	640,807	628,731	724,500
Trade receivables	774,308	828,329	751,843	693,433	821,687	754,369	799,327
Other receivables	63,942	88,319	84,325	83,781	106,627	99,286	108,484
Short-term deposits	104,699	382,607	104,792	10,172	14,160	10,216	5,342
Cash and cash equivalents	338,238	293,856	352,312	391,857	458,542	401,771	365,546
Other current assets	118,427	62,549	60,129	51,213	65,050	66,049	52,225
Assets classified as held for sale	-	35,492	-	2,096	-	-	112,361
Total assets	3,673,137	4,169,105	3,667,698	3,380,457	3,957,715	3,881,119	4,304,313

Equity	1,696,627	1,766,422	1,603,714	1,503,876	1,566,212	1,515,911	1,597,893
Share capital	176,242	176,512	176,586	176,773	176,914	176,957	177,612
Share premium	27,582	29,858	30,194	31,055	31,693	31,884	36,594
Retained earnings	1,463,838	1,557,419	1,327,346	1,307,618	1,352,197	1,397,356	1,432,394
Other Group reserves	-56,995	-69,901	-112,035	-169,170	-194,013	-221,498	-179,508
Equity attributable to the Group	1,610,667	1,693,888	1,422,091	1,346,276	1,366,791	1,384,699	1,467,092
Non-controlling interests	85,960	72,534	181,623	157,600	199,421	131,212	130,801
Non-current liabilities	936,879	1,137,969	1,110,173	904,966	1,204,581	1,077,862	1,504,487
Employee benefit obligations	150,893	161,256	180,200	136,602	175,774	167,131	182,641
Provisions	34,335	32,002	42,364	40,510	55,744	50,198	63,107
Interest-bearing debt	700,488	907,573	850,050	688,244	910,074	792,116	1,161,310
Other non-current liabilities	9,452	10,422	5,571	2,587	8,736	15,204	44,873
Deferred tax liabilities	41,711	26,716	31,988	37,023	54,253	53,213	52,556
Current liabilities	1,039,631	1,264,714	953,811	971,615	1,186,922	1,287,346	1,201,933
Interest-bearing debt	320,315	648,485	342,549	321,907	441,552	494,714	297,916
Trade payables	341,664	290,635	321,760	338,864	390,943	456,783	556,361
Employee benefit obligations	128,231	107,978	122,263	121,117	121,934	131,281	132,913
Provisions	15,257	13,241	19,841	23,912	20,493	26,973	17,720
Income taxes	94,666	75,680	66,898	83,329	97,424	105,832	101,683

payable							
Other current liabilities	139,498	116,023	80,500	82,486	114,576	71,763	61,840
Liabilities associated with assets classified as held for sale	-	12,672	-	-	-	-	33,500
Total liabilities and equity	3,673,137	4,169,105	3,667,698	3,380,457	3,957,715	3,881,119	4,304,313

Annex 2

Income statement of Bekaert (in thousands of €)

	2010	2011	2012	2013	2014	2015	2016
Sales	3,262,496	3,339,957	3,460,624	3,185,628	3,215,714	3,671,081	3,715,217
Cost of sales	-2,358,225	-2,688,542	-2,981,782	-2,703,316	-2,729,995	-3,072,673	-3,025,225
Gross profit	904,271	651,415	478,842	482,312	485,719	598,408	689,992
Selling expenses	-128,998	-148,947	-157,772	-128,207	-138,126	-156,106	-175,340
Administrative expenses	-135,830	-134,443	-134,419	-124,924	-126,894	-150,005	-139,558
Research and development expenses	-79,330	-90,146	-69,449	-62,429	-59,261	-64,597	-63,590
Other operating revenues	15,978	14,691	18,287	12,502	21,978	17,120	24,376
Other operating expenses	-13,602	-11,712	-17,668	-13,337	-19,009	-21,931	-76,226
Operating result before non-recurring items (REBIT)	562,489	280,858	117,821	165,917	164,407	222,889	259,654
Non-recurring items	-28,221	-12,426	-167,101	-28,647	6,847	-2,769	-
Operating result (EBIT)	534,268	268,432	-49,280	137,270	171,254	220,120	259,654
Interest income	9,305	7,521	8,711	6,449	5,291	8,585	6,325
Interest expense	-59,356	-73,315	-87,785	-70,154	-68,215	-70,941	-79,493
Other financial income and	17,694	47,279	-2,879	-19,822	-3,730	-33,811	-37,458

expenses							
Result before taxes	501,911	249,917	-131,233	53,743	104,600	123,953	149,028
Income taxes	-139,464	-68,133	-67,715	-47,916	-42,376	-36,387	-62,052
Result after taxes (consolidated companies)	362,447	181,784	-198,948	5,827	62,224	87,566	86,976
Share in the results of joint ventures and associates	36,064	25,423	10,383	30,244	25,330	18,320	25,445
RESULT FOR THE PERIOD	398,511	207,207	-188,565	36,071	87,554	105,886	112,421
Attributable to							
the Group	367,647	192,643	-194,940	24,574	87,176	101,969	105,166
non-controlling interests	30,864	14,564	6,375	11,497	378	3,917	7,255

Annex 3

Cash flow statement of Bekaert (in thousands of €)

	2010	2011	2012	2013	2014	2015	2016
Operating activities							
Operating result (EBIT)	534,268	268,432	-49,280	137,270	171,254	220,120	259,654
Non-cash and investing items included in operating result	192,766	184,622	313,311	148,035	135,338	191,881	212,397
Income taxes paid	-113,305	-129,265	-59,186	-51,507	-45,827	-56,657	-96,388
Gross cash flows from operating activities	613,729	323,789	204,845	233,798	260,765	355,344	375,663
Change in operating working capital	-276,886	-199,805	226,813	78,491	-54,623	212,266	16,336
Other operating cash flows	5,635	-18,390	7,195	-6,526	-19,193	15,952	7,553
Cash flows from operating activities	342,478	105,594	438,853	305,763	186,949	583,562	399,552
Investing activities							
New business combinations	-29,650	-4,381	8,160	-	-108,512	-129,833	40,917
Other portfolio investments	-289	-13,518	-32	-	-1,973	-109,559	-41
Proceeds from disposals of investments	12,596	101,344	22,769	6,668	3,103	30,761	13
Dividends received	40,360	7,511	6,519	13,705	20,724	18,411	22,422
Purchase of intangible assets	-17,276	-11,090	-3,986	-2,176	-21,752	-5,868	-5,995
Purchase of property, plant and equipment	-230,339	-266,637	-123,356	-94,637	-132,784	-170,702	-158,529
Other investing cash flows	14,085	1,755	8,730	4,474	15,847	3,806	1,187

Cash flows from investing activities	-210,513	-185,016	-81,196	-71,966	-225,347	-362,984	-99,986
Financing activities							
Interest received	9,578	4,046	7,494	9,989	5,338	7,320	7,338
Interest paid	-53,033	-63,011	-85,249	-75,291	-61,069	-64,302	-63,397
Gross dividend paid	-118,504	-163,071	-46,127	-58,341	-66,396	-55,566	-67,977
Proceeds from non-current interest-bearing debt	163,643	432,219	93,711	80,036	343,960	145,151	172,072
Repayment of non-current interest-bearing debt	-75,060	-57,430	-271,322	-202,201	-191,172	-127,945	-375,255
Cash flows from current interest-bearing debt	121,004	105,594	-236,898	-34,338	147,605	-184,093	-5,567
Treasury shares transactions	-57,738	681	-	-15,275	-72,102	1,206	7,538
Other financing cash flows	90,222	-238,569	266,499	103,005	-18,219	10,421	23,193
Cash flows from financing activities	80,112	20,459	-271,942	-192,416	87,945	-267,808	-302,055
Net increase or decrease (-) in cash and cash equivalents	212,077	-58,963	85,715	41,381	49,547	-47,230	-2,489
Cash and cash equivalents at the beginning of the period	121,171	338,238	293,856	352,312	391,857	458,542	401,771
Effect of exchange rate fluctuations	4,990	14,581	-27,259	-1,836	17,138	-9,541	-33,736
Cash and cash equivalents at the end of the period	338,238	293,856	352,312	391,857	458,542	401,771	365,546